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OM protein - protein search, using sw model

May 30, 2003, 09:49:41; Search time 22 Seconds (without alignments) 64.100 Million cell updates/sec Run on:

SEQ1 183 1 mcsnlstcvlgklsqelhklqtyprtntgsgtpg 34 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

112892 Total number of hits satisfying chosen parameters:

112892 seqs, 41476328 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | Description | | | oncorhy | | | | P01258 homo sapien | 20 | | | | | | | | | - | | P19824 chlamydomon | _ | Q8xjd8 clostridium | | | 075962 homo sapien | | | Q09793 schizosacch | P32795 saccharomyc | P40856 saccharomyc | P38737 saccharomyc | 8 | 920 | P18752 xenopus lae | |
|-----------|---------------|------------|-----------|------------|-----------|------------|----------|--------------------|------------|-----------|-----------|------------|------------|-----------|---------|------------|------------|------------|------------|--------------------|------------|--------------------|------------|-----------|--------------------|------------|------------|--------------------|--------------------|--------------------|--------------------|-----------|------------|--------------------|--|
| SUMMARIES | DI | CAL1_ONCKE | CAL_ANGJA | CAL2_ONCKE | CAL_CHICK | CAL3_ONCKI | CALO_RAT | CALO_HUMAN | CALO_MOUSE | CAL_CANFA | CAL_SHEEP | KPPR_SPIOL | KPPR_MESCR | CAL_BOVIN | CAL_PIG | KPPR_ARATH | KPPR_WHEAT | NO2B_SOYBN | SP2P_BACSU | KPPR_CHLRE | A2AP_MOUSE | EX7L_CLOPE | YB98_HUMAN | EAE_ECO27 | TRIO_HUMAN | RE15_SCHPO | NUOB_BUCAI | NG79_SCHPO | YME1_YEAST | S185_YEAST | YHD0_YEAST | IPT_AGRT4 | YQCD_ECOLI | ZO72_XENLA | |
| | Length DB | | 32 1 | | | | 36 | | 36 | 92 | 43 | | 97 | | | 95 | 04 | 13 | 01 | 75 | 91 | | 59 | 939 | 38 | 80 | 24 | 25 | 747 | 58 | 898 | 40 | 82 | 91 | |
| dР | Query | 97.3 | 86.9 | 85.8 | 85.8 | 84.2 | 59.0 | 55.2 | 54.6 | 49.2 | 39.3 | 37.2 | 36.6 | 33.9 | 33.3 | 33.3 | 33.3 | 29.8 | 29.8 | 28.4 | 27.9 | 26.8 | 26.8 | 26.8 | 26.8 | 26.3 | 26.2 | 26.2 | 26.2 | 26.2 | 26.0 | 25.7 | 25.7 | 25.7 | |
| | Score | 178 | 159 | 157 | 157 | 154 | 108 | 101 | 100 | 06 | 72 | 89 | 67 | 62 | 61 | 61 | 61 | 54.5 | 54.5 | 52 | 51 | 49 | 49 | 49 | 49 | 48 | 48 | 48 | 48 | 48 | 47.5 | 47 | 47 | 47 | |
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ALIGNMENTS

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OF THOSE IONS IN THE BONES
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P01264;
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SEQUENCE
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                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the Lucepean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                             PHARMACEUTICAL: Available under the names Calcimar (Rhone-Poulenc Rorer), Miacalcin (Novartis) or Forcaltonin (Unigene). Used for the treatment of Paget's disease and hypercalcemia in malignancy. SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hashimoto Y., Toma K., Nishikido J., Yamamoto K., Haneda K., Inazu T., Valentine K.G., Opella S.J.;
"Effects of glycosylation on the structure and dynamics of eel calcitonin in micelles and lipid bilayers determined by nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Anguilla japonica (Japanese eel).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
                                                                                                                                                                                                                                                                                                                                                                                         AMIDATION (G-115 PROVIDE AMIDE GROUP)
Biochemistry 30:10444-10450(1991).
-!- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              magnetic resonance spectroscopy.";
Biochemistry 38:8377-8384(1999).
-!- FUNCTION: CAGGES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF
CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                  PROSITE; PS00258; CALCITONIN; 1.
Cleavage on pair of basic residues; Amidation; Hormone; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 136;
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 178; DB 1; Length 13st Pred. No. 1.1e-18; Oreman O; Indels
                                                                                                                                                                                                                                                                                                                                                                                                      15179 MW; BDD8867AE113B2A8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                    97.3%; Scor.
100.0%; Pred. No. 1...
'... 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32 AA
                                                                                                                                                                                                                                                                                                                                                                     CALCITONIN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Noda T., Narita K.;
"Amino acid sequence of eel calcitonin.";
J. Biochem. 79:353-359(1976).
                                                                                                                                                                                                                                        HSSP; P01262; 1BKU.
InterPro; IPR001693; Calcitonin-like.
InterPro; IPR001935; Calcitonin_A.
Pfam; PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
SMART; SM00113; CALCITONIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                      THOSE IONS IN THE BONES.
                                                                                                                                                                                                        EMBL; Y00765; CAA68734.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
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114
89
114
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PIR; A31229; A31229.
                                                                                                                                                                                                                                                                                                                                                                                          114 1
136 AA;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7937;
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P01262;
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DISULFID
MOD_RES
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                       SIGNAL
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Keutmann H.T., Lequin R.M., Habener J.F., Singer F.R., Niall H.D., Potts J.T. Jr.; "Chemistry and physiology of the calcitonins: some recent advances."; (In) Taylor S. (eds.); Cds.); Endocrinology 1971: proceedings of the third international symposium, pp.316-323, Heinemann Medical Books, London (1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oncorhynchus keta (Chum salmon), and Oncorhynchus nerka (Sockeye salmon), and Oncorhynchus nerka (Sockeye salmon) (Humpback salmon).

Bukaryota: Metazota; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii: Neopterygii; Teleostei; Euteleostei; Protacanthopterygii: Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pless J., Bauer W., Bossert H., Zehnder K., Guttmann S., "Synthesis of two natural salmon calcitonins."; nature New Biol. 240:62-63(1972).

-:- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                  Length 32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                  AMIDATÍON.
AFC93549F8048922 CRC64;
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AFCB969AF807E7C2 CRC64;
-!- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
PIR; A01529; TCEE.
PIR; A01529; TCEE.
INTERPLO; 18-MAR-99.
INTERPRO; 18-MAR-99.
INTERPRO; 1PR001693; Calcitonin_A.
FRAM; PF00214; Calcitonin_A.
PRAM; PF00214; Calcitonin_A.
PRNINTS; PR00270; CALCITONINA.
SWART; SM00113; CALCITONINA, 1.
PROSITE; PS00258; CALCITONIN, 1.
PROMORE; Middion; 3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF THOSE IONS IN THE BONES.
-!- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
PIR; A01531; TCON2.
PIR; A01531, TCON2.
PIR; D01531; TCON2.
IN 1901262; 1BKU.
InterPro; IPR001693; Calcitonin-like.
InterPro; IPR001693; Calcitonin-like.
Pfam; PF00214; Calc. CGRP. IAPP; 1.
PRINTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                                                                                                                                                                                                    Score 159; DB 1;
Pred. No. 1.3e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=73047885; Pubmed=4508400;
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PROSITE; PS00258; CALCITONIN; 1.
                                                                                                                                                                                                                                                                                                               32 32
32 AA; 3418 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 90.6
les 29; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF THOSE IONS IN THE BONES.
-!- ALTERNATIVE PRODUCTS: THE CALCITONIN PRECURSOR AND THE CALCITONIN RELATED PEPTIDE PRECURSOR ARE OBTAINED BY TISSUE-SPECIFIC SPLICING
                                                                                                                                                                                                                                                                                           Calcitonin precursor.
Gallus gallus (Chicken).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Elucidation of the nucleotide sequence of chicken calcitonin mRNA: direct evidence for the expression of a lower vertebrate calcitonin-like gene in man and rat."; EMBO J. 4:2603-2607(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homma T., Watanabe M., Hirose S., Kanai A., Kangawa K., Matsuo H., "Isolation and determination of the amino acid sequence of chicken calcitonin I from chicken ultimobranchial glands.";
J. Blochem. 100:459-467(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 71-117 FROM N.A.
MEDLINE-85102042; PubMed=3838160;
Lasmoles F., Jullienne A., Desplan C., Milhaud G., Moukhtar M.S.;
"Structure of chicken calcitonin predicted by partial nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
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Minvielle S., Cressent M., Delehaye M.C., Segond N., Milhaud
Jullienne A., Moukhtar M.S., Lasmoles F.;
"Sequence and expression of the chicken calcitonin gene.";
FEBS Lett. 223:63-68(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-86030240; PubMed=4054101;
Lasmoles F., Jullienne A., Day F., Minvielle S., Milhaud G.,
Moukhtar M.S.;
                                  Indels
. No. 2.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                                                                                                                                                                                                                                     01-APR-1988 (Rel. 07, Created)
01-NOV-1991 (Rel. 20, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                      AA.
                                  3; Mismatches
                                                                     2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X06312; -; NOT_ANNOTATED_CDS.
EMBL; X06313; -; NOT_ANNOTATED_CDS.
EMEL; X03012; CAA26796.1; -.
EMBL; M27563; AAA48648.1; -.
PIR; S00153; TCCH.
               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 82-113 FROM N.A.
MEDLINE-87057104; PubMed=3782060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence of its precursor."; FEBS Lett. 180:113-116(1985).
             87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 12-138 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X06311; CAA29630.1; -.
                                  28; Conservative
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               Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (In) Taylor S. (eds.);
Endocrinology 1971: proceedings of the third international symposium,
pp.316-323, Heinemann Medical Books, London (1972).
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MISCELLANEOUS: CALCITONIN 1 IS LESS ACTIVE THAN CALCITONINS 1 OR 2. ONLY THIS SPECIES OF SALMON POSSESSES CALCITONIN 3.
                                                                                                                                              PROSITE; PS00258; CALCITONIN; 1.
Cleavage on pair of basic residues; Amidation; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                           AMIDATION (G-114 PROVIDE AMIDE GROUP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY SEQUENCE.
Keutmann H.T., Lequin R.M., Habener J.F., Singer F.R., Niall H.D.,
Potts J.T. Jr.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pless J., Bauer W., Bossert H., Zehnder K., Guttmann S.; "Synthesis of two natural salmon calcitonins."; Nature New Biol. 240:62-63(1972).

-: FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protracanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBL_raxID=0019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                    D -> E (IN REF. 2).
730B618CF724F248 CRC64;
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B57A3D9AF807E7C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 157; DB 1; L
Pred. No. 1.2e-15;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -i- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
PIR; B01531; TCON3.
HSSP; P01262; 1BKU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CSNLSTCVLGKLSQELHKLQTYPRINTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                                                                                                                                                  CALCITONIN.
                                                                                                                                                                                                                                  POTENTIAL.
                Interpro: IPR001693; Calcitonin-like.
Interpro: IPR001935; Calcitonin_A.
Pfam. PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro, IPR001693; Calcitonin-like.
InterPro; IPR001935; Calcitonin_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oncorhynchus kisutch (Coho salmon)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=73047885; PubMed=4508400;
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PRINTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                          25 PC 79 79 113 CA 138 88 88 AN 56 156 BD 15308 MW;
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PROSITE; PS00258; CALCITONIN;
Hormone; Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               85.8%;
84.8%;
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28; Conservative
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                                                                                                                                                                                                                                                     26
82
118
82
113
56
138 AA;
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32 AA;
                                                                                                                                                                                                    Hormone; Signal
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SEQUENCE
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MOD_RES
CONFLICT
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Best Local
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PROPEP
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CAL3_ONCKI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-7611055; PubMed-1278175;
Raulais D., Hagaman J., Ontjes D.A., Lundblad R.L., Kingdon H.S.;
"The complete amino-acid sequence of rat thyrocalcitonin.";
Fur. J. Biochem. 64:607-611(1976).

-!- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF
CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
OF THOSE IONS IN THE BONES.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: THE CALCITONIN PRECURSOR AND THE CALCITONIN
RELATED PEPTIDE PRECURSOR ARE OBTAINED BY TISSUE-SPECIFIC SPLICING
                                          Gaps
                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-81225842; PubMed-6264603;
Jacobs J.W., Goodman R.H., Chin W.W., Dee P.C., Habener J.F.,
Bell N.H., Potts J.T. Jr.;
"Calcitonin messenger RNA encodes multiple polypeptides in a single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 83-136 FROM N.A.
MEDLINE-81054790; PubMed=6933496;
Amara S.G., David D.N., Rosenfeld M.G., Roos B.A., Evans R.M.;
"Characterization of rat calcitonin mRNA.";
Proc. Natl. Acad. Sci. U.S.A. 77:4444-4448(1980).
                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rosenfeld M.G., Amara S.G., Evans R.M.;
"Alternative RNA processing events as a critical developmental regulatory strategy in neuroendocrine gene expression.";
Blochem. Soc. Symp. 49:27-44(1984).
          Length 32;
                                         Indels
       Score 154; DB 1; L
Pred. No. 6.7e-16;
4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                                                                                                                                                                                                                            21-JUL-1986 (Rel. 01, Created)
01-MAR-1989 (Rel. 10, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                           1 CSNLSTCMLGKLSQDLHKLQTFPRTNTGAGVP 32
                                                                       2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                   AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-87025913; PubMed-6400492;
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       84.28;
84.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 213:457-459(1981).
                                          Conservative
                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                   Calcitonin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OF THE SAME GENE.
Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 85-116.
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10116;
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L00110;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor
                                                                                                                                                                                             CALO_RAT
                                                                                                                                                                                                               P01257
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EMBL;
EMBL;
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                                                                                                                                                               RESULT 6
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SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE-89386053; Pubmed=2571128;
Broad P.M., Symes A.J., Thakker R.V., Craig R.K.;
"Structure and methylation of the human calcitonin/alpha-CGRP gene.";
Nucleic Acids Res. 17:6999-7011(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED (GLCNAC. . .) (PROBABLE).
AMIDATION (G-117 PROVIDE AMIDE GROUP).
A197358A802222F7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALO_HUMAN STANDARD; PRT; 141 AA.
901256, 013937;
21-JUL-1986 (Rel. 01, Created)
01-APR-1988 (Rel. 07, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
2015-tin precursor (Contains: Calcitonin, Ratacalcin (Calcitonin carboxyl-terminal peptide) (CCP) (PDN-21)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Riley J.H., Edbrooke M.R., Craig R.K.;
Estopic synthesis of high-Mr calcitonin by the BEN lung carcinoma
cell line reflects aberrant proteolytic processing.";
FEBS Lett. 198:71-79(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORM 1).
MEDILINESBE1166259; PubMed-3872459;
Jonas V. Lin C.W.,
Mermod J.-J., Evans R.M., Rosenfeld M.G.;
Metmod J.-J., Evans R.M., Rosenfeld M.G.;
Malternative RNA processing events in human calcitonin/calcitonin
gene-related peptide gene expression.
Proc. Natl. Acad. Sci. U.S.A. 82:1994-"1998(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Eutheria, Primates, Catarrhini, Hominidae, Homo.
                 HSSP, P01262, 1BKG.
InterPro; IPR001693; Calcitonin-like.
InterPro; IPR001935; Calcitonin_A.
InterPro; IPR001935; Calcitonin_A.
Pfm; PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
SMART; SM00113; CALCITONIN, 1.
Cleavage on pair of basic residues; Signal; Amidation; Hormone; Glycoprotein; Alternative splicing.
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O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; DB 1; Lens.
1.4e-08; Indels
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MEDLINE-84132556; PubMed=6546550;
le Moullec J.M., Jullienne A., Chenais J., Lasmoles Guliana J.M., Milhaud G., Moukhtar M.S.;
"The complete sequence of human preprocalcitonin.";
FEBS Lett. 167:93-97(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 108;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                CALCITONIN
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MEDLINE=86164952; PubMed=3485540;
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MEDLINE=87213363; Pubmed=3034287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15103 MW;
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54.5%;
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82
116
136
91
87
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 18; Conserv
PIR; A01525; TCRT
                                                                                                                                                                                                                                                                                                    26
85
121
85
87
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SEQUENCE
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                                                                                                                                    TISSUE=Thyroid carcinom;

MEDILNE=92105127; PubMed=1761559;

Minvielle S., Giscard-Dartevelle S., Cohen R., Taboulet J., Labye F.,

Minvielle S., Riscard-Dartevelle S., Cohen R., Lasmoles F.,

Manovel calcitonin carboxyl-terminal peptide produced in medullary
thyroid carcinoma by alternative RNA processing of the
calcitonin/calcitonin gene-related peptide gene.";
J. Biol. Chem. 266:24627-24631(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -:- FUNCTION: Katacalcin is a potent plasma calcium-lowering peptide.
-:- SUBCELLULAR LOCATION: Secreted.
-:- ALTERNATUVE PRODUCTS: 3 ISOFORMS; 1 (SHOWN HERE), 2 AND 3 (AC P06881); ARE PRODUCED BY ALTERNATIVE SPLICING.
-:- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                Al-Kazwini S.J., Holman J.J., Marshall I.; "Expression and function of the human calcitonin/alpha-CGRP gene in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Katacalcin: a new plasma calcium-lowering hormone.";
Lancet 1:846-848(1983).
-!- FUNCTION: CALCITONIN CAUSES A RAPID BUT SHORT-LIVED DROP IN THE
LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE
INCORPORATION OF THOSE IONS IN THE BONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           [8]
SEQUENCE OF 48-83 FROM N.A.
MEDLINE-85022523; Pubmed-6148938;
Nelkin B.D., Rosenfeld K.I., de Bustros A., Leong S.S., Roos B.A.,
Baylin S.B.;
                                                                                                                                                                                                                                                                                                                                                        Edbrooke M.R., Parker D., McVey J.H., Riley J.H., Sorenson G.D., Pettengill O.S., Craig R.K.;
"Expression of the human calcitonin/CGRP gene in lung and thyroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Structure and expression of a gene encoding human calcitonin and calcitonin gene related peptide."; Biochem. Biophys. Res. Commun. 123:648-655(1984).
Craig R.K., Riley J.H., Edbrooke M.R., Broad P.M., Foord S.M.,
Al-Kazwini S.J., Holman J.J., Marshall I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hillyard C.J., Myers C., Abeyasekera G., Stevvensvenson J.C.,
Craig R.K., MacIntyre I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 85-116.
MEDILINE-72162720; PubMed-5760861;
Weber R., Riniker B., Rittel W., Zuber H.;
"Human calcitonin. Structure of calcitonin M and D.";
Hely. Chim. Acta 51:1900-1905(1968).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRÜCTURE BY NMR OF CALCITONIN.
MEDLINE-91159414; PubMed-2001366;
MOTTA A., TEMUSSI P.A., WUNSCH E., Bovermann G.;
"A 1H NMR study of human calcitonin in solution.";
                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 49-141 FROM N.A. (ISOFORM 1).
                                                                           Biochem. Soc. Symp. 52:91-105(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X15943; CAA34070.1; ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                          MEDLINE=85230541; PubMed=2408883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=83166029; PubMed=6132180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochemistry 30:2364-2371(1991).
                                                                                                                     (ISOFORM 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHARACTERIZATION OF KATACALCIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBO J. 4:715-724(1985).
                                                        disease.";
                                                                                                               SEQUENCE FROM N.A.
                                                          health and
                                                                                                                                                                                                                                                                                                                                                                                                                           carcinoma
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K03513; AAA52124.1; -. M12666; AAA51913.1; -. M12664; AAA51913.1; JOINED. M12665; AAA51913.1; JOINED.

EMBL; EMBL; EMBL;

X00356; CAA25103.1;

EMBL;

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                                                                                                                                                                                                                                               Cleavage on pair of basic residues; Amidation; Alternative splicing; Hormone; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                 AMIDATION (G-117 PROVIDE AMIDE GROUP). VSMPQNAN -> NHCPEESL (IN ISOFORM 2). M -> I (IN REF. 3). 99622305DD8B286F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE—Thyroid;

MEDINE—96400274; PubMed=8806650;

Rehli M., Luger K., Beier W., Falk W.;

Molecular cloning and expression of mouse procalcitonin.";

Blochem. Blophys. Res. Commun. 226:420-425(1996).

-! FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION OF THOSE IONS IN THE BONES.

-! SUBCELLULAR LOCATION: Secreted.

-! ALTERNATIVE PRODUCTS: 2 isoforms; I (shown here) and 2 (AC Q99JA0); are produced by alternative splicing.

-! SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                          Length 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                         Score 101; DB 1;
Pred. No. 1.5e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    136 AA
                                                                                                                                                                                                                                                                                                                      KATACALCIN
                                                                                                                                                      InterPro; IPR001693; calcitonin-like.
InterPro; IPR001935; calcitonin_A.
Pfam: PF00214; calc.CGFP_IAPP; 1.
SMRNTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
9
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                                                                                                                                                                                                                                                                                                                                                                             92 M
15467 MW;
                                                                                                                                                                                                                                    CALCITONIN;
                                                                                                                                                                                                                                                                                                                                                                                                                       55.2%;
EMBL: X03662; CAA27299.1;
EMBL: M64486; AAA58403.1;
EMBL: M26095; AAA35501.1;
PIR; A22716; TCHU.
PIR; C22949; C22949.
                                                                     PIR; S07238; S07238.
PIR; S07242; S07242.
PIR; S07643; S07643.
HSSP; P01262; 1BKU.
Genew; HGNC:1437; CALCA.
MIM; 114130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                           25
82
116
141
91
141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calcitonin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                              141 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                  SMART; SM00113; CA
PROSITE; PS00258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                         26
85
121
85
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALO_MOUSE
P70160;
                                                                                                                                                                                                                                                                                                                                DISULFID
MOD_RES
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                       PROPEP
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                      PEPTIDE
                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALO_MOUSE
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    Qy
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MEDLINE-92100867; Pubmed-1758974;
MEDLINE-92100867; Pubmed-1758974;
Medl J.A., Kwant M.M., Arnold I.C.J., Hazewinkel H.A.W.;
"Elucidation of the sequence of canine (pro)-calcitonin. A molecular biological and protein chemical approach.";
Regul. Pept. 35:189-195(1991).
-i- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -1- TISSUE SPECIFICITY: SYNTHESIZED BY C-CELLS OF THE THYROID GLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. . .) (PROBABLE).
AMIDATION (G-117 PROVIDE AMIDE GROUP).
B7FIDD27F7E10DE5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
                                                                                                                                                                                                                                 SMART; SMO0113; CALCITONIN; 1.
PROSTRE; PS00255; CALCITONIN; 1.
Cleavage on pair of basic residues; Signal; Amidation; Hormone;
Glycoprotein; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54.6%; Score 100; DB 1; Length 136; 51.5%; Pred. No. 2.1e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-25, AND SEQUENCE OF 26-92 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                               CALCITONIN
                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; A60063; A60063.

HSSP; P01262; 1BKU.
INTERPO; IPR001693; Calcitonin-like.
INTERPO; IPR001935; Calcitonin-A.
PRINTS; PR00270; CALCITONINA.
SMART; SM00113; CALCITONIN; 1.
                                                                            MGD; MGI:2151253; Calca.
InterPro; IPR001693; Calcitonin-like.
InterPro; IPR001953; Calcitonin_A.
Pfam; PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequenc
15-UNN-2002 (Rel. 41, Last annotat
Calcitonin precursor (Fragments).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X56994; CAA40311.1; ALT_SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00258; CALCITONIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THOSE IONS IN THE BONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116 P
                           EMBL; X97991; CAA66630.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Canis familiaris (Dog).
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82
116
136
91
87
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P41547;
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SEQUENCE
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PEPTIDE
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CAL_CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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                                                                                                                                                               ö
                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cumaraswamy A., Borges M., Tamir H., Nelkin B.D.;
Lioning of a cDNA encoding sheep calcitonin from a thyroid C-cell
                                                                                                                                                                                                                                                                                                                                                                                                                          Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF CALCULM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION OF THOSE IONS IN THE BONES.
-!- SIMILARITY: BELONGS TO THE CALCITONIN FAMILY.
                                          BY SIMILARITY.
AMIDATION (G-79 PROVIDE AMIDE GROUP)
                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cleavage on pair of basic residues; Amidation; Hormone; Signal.
                                                                                                                                                               .;
0
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                                                                                                                                 Length 92;
                                                                                                                                                               11; Indels
Cleavage on pair of basic residues.
                                                                                                     53B103230864039D CRC64;
                                                                                                                                  Score 90; DB 1;
Pred. No. 3.8e-06;
                                                                          (BY SIMILARITY).
                                                                                                                                                                                         2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                          CAL_SHPEP STANDARD; PRT; 143 AA. P01261; 21-JUL-1986 (Rel. 01, Created) 01-JUN-1994 (Rel. 29, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Calcitonin precursor.
                                                                                                                                                               5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALCITONIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001693; Calcitonin-like.
InterPro; IPR001935; Calcitonin_A.
Pfam. PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
SMART; SM00113; CALCITONIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M98053; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
TISSUE-Thyroid;
MEDLINE-93246256; PubMed-8482543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00258; CALCITONIN; 1.
                                                                                                                                  49.2%;
51.5%;
                                                                                                    9974 MW;
                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gene 126:269-273(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Ceta
Bovidae; Caprinae; Ovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25
84
1118
143
93
 Amidation;
                                                                                                                                                                                                                                                                                                                                                                                                 Ovis aries (Sheep).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 87-118.
                                                                                                                                             Local Similarity
es 17; Conserv
                                                                                                    92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9940;
                   25
47
78
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DISULFID
MOD_RES
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DISULFID
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SEQUENCE
    Hormone;
                  NON_CONS
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                                                                                                                                                               Matches
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Query Match
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                                                     Gaps
                                                                                                                                                                                                                                                                                                                                              Roesler K.R., Ogren W.L.; "Nucleotide sequence of spinach cDNA encoding phosphoribulokinase."; Nucleic Acids Res. 16:7192-7192(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ribulose 1,5-bisphosphate.
-!- ENZYME REGULATION: LIGHT REGULATED VIA THIOREDOXIN BY REVERSIBLE OXIDATION/REDUCTION OF SULFHYDRYL/DISULFIDE GROUPS.
                                                                                                                                                                                                                                               Spinacia oleracea (Spinach).
Wararyota: Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta: Magnollophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Spinacia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Porter M.A., Milanez S., Stringer C.D., Hartman F.C.;
"Purification and characterization of ribulose-5-phosphate kinase
from spinach.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Porter M.A., Hartman F.C.; "Commonality of catalytic and regulatory sites of spinach phosphoribulokinase: characterization of a tryptic peptide that contains an essential cysteinyl residue."; Biochemistry 25:7314-7318(1986).
                                                   ó,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Biol. Chem. 263:123-129(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                     Milanez S., Miral R.J.;
"Cloning and sequencing of CDNA encoding the mature form of phosphoribulokinase from spinach.";
                            Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- PATHWAY: Calvin cycle.
-!- SIMILARITY: BELONGS TO THE PHOSPHORIBULOKINASE FAMILY.
                                                                                                                                                                                01-MAR-1989 (Rel. 10, Created)
01-MAR-1989 (Rel. 10, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Phosphoribulokinase, chloroplast precursor (EC 2.7.1.19)
[Phosphopentokinase] (PRRASE) (PRR)
                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F.C.;
thioredoxin site of
 15658 MW; D4CEB15C5C06B663 CRC64;
               Score 72; DB 1; Len
Pred. No. 0.0024;
                                                                                      3; Mismatches
                                                                                                                                                               402 AA
                                                                         2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arch. Biochem. Biophys. 245:14-23(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-88087076; PubMed=2826432;
Porter M.A., Stringer C.D., Hartman F.
"Characterization of the regulatory th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFIDE BOND, AND PARTIAL SEQUENCE.
                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 7-402 FROM N.A.
MEDLINE=88329728; Pubmed=2843430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=86129440; PubMed=3004354;
                                                                                                                                                                                                                                                                                                                                     MEDLINE=88303351; PubMed=2841650;
                         39.3%;
45.5%;
                                                 Conservative
                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 7-402 FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phosphoribulokinase.";
               Query Match
Best Local Similarity
"***rhes 15; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene 66:55-63(1988).
 143 AA;
                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 52-69.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 52-69.
                                                                                                                                                                                                                                                                                               NCBI_TaxID=3562;
                                                                                                                                                             KPPR_SPIOL
 SEQUENCE
                                                                                                                                              KPPR_SPIOL
SO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ribulose 1,5-bisphosphate.
-!- ENZYME REGULATION: LIGHT REGULATED VIA THIOREDOXIN BY REVERSIBLE OXIDATION/REDUCTION OF SULFHYDRYL/DISULFIDE GROUPS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, Caryophyllidae, Caryophyllales; Aizoaceae; Mesembryanthemum.
                                                                                                                                                                                                          PRINTS; PR00478; PHRIBLKINASE.
PROSITE; PS00567; PHOSPHORIBULOKINASE; 1.
Transferase; Kinase; Chloroplast; Transit peptide; Calvin cycle;
ATP-binding; Photosynthesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FIGURES: PRODUCE, PRIBLKINASE.
PRINTS: PRODUCE, PRODUCE, PROSTIE: PS00367; PHOSPHORIBULOKINASE; 1.
Transferase; Kinase; Chloroplast; Transit peptide; Calvin cycle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Michalowski C.B., Derocher E.J., Bohnert H.J., Salvucci M.E., Submitted (XXX-1991) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Phosphoribulokinase, chloroplast precursor (EC 2.7.1.19)
(Phosphopentokinase) (PRKASE) (PRK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHLOROPLAST (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                 45007 MW; 450759B96A675C6B CRC64;
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BY SIMILARITY.
88DC418E211EC975 CRC64;
                                                                                                                                                                                                                                                                                                                                                PHOSPHORIBULOKINASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mesembryanthemum crystallinum (Common ice plant)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  37.2%; Score 68; DB 1; 44.8%; Pred. No. 0.028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   343 SNLSTKFYGEVTQQMLKHQNFPGSNNGTG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 SNLSTCVLGKLSQELHKLQTYPRTNTGSG 31
                                                                                                                                                                                                                                                                                                                    CHLOROPLAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
EMBL; X07654; CAA30499.1; -.
EMBL; M21338; AAA34036.1; ALT_INIT
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InterPro; IPR001324; PRK.
Pfam: PF00485; PRK; 1.
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ATP-binding; Photosynthesis.
                                                                                                                                                         InterPro; IPR001324; PRK.
Pfam; PF00485; PRK; 1.
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                                                                                                                                                                                                                                                                                                                                          402
106
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                                                                                                  PIR; JA0064; JA0064.
PIR; S02099; S02099.
                                                      PIR; A25182; A25182.
                                                                                                                                                                                                                                                                                                                                                                                              402 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00485; PRK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                397 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=3544;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13;
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                                                                                                                                                                                                                                                                                                                                                                   DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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Length 397;

DB 1;

Score 67;

36.68;

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Gaps

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Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
NCBI_TaxID=9823;
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Potts J.T. Jr., Niall H.D., Keutmann H.T., Brewer H.B. Jr.
Deftos L.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 32;
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             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The amino acid sequence of porcine thyrocalcitonin.";
Proc. Natl. Acad. Sci. U.S.A. 59:1321-1328(1968).
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDEA2A3ADFFE4909 CRC64;
             8;
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Pred. No. 0.013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update).
15-JUL-1998 (Rel. 36, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CSNLSTCVLSAYWKDLNNYHRFSGMGFGPETP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32 AA
                                                                                                                 32 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
  Pred. No. 0.038; Mismatches
                                                338 SNLSTKFYGEVTQQMLKHQDFPGSNNGTG 366
                                  3 SNLSTCVLGKLSQELHKLQTYPRTNTGSG 31
                                                                                                                                                                                                                                                                                                                                                                    PIR; A01528; TCBO.
InterPro; IPRO01693; Calcitonin-like.
InterPro; IPRO01935; Calcitonin_A.
Pfam; PF00214; Calc_CGRP_IAPP; I.
SMRNTS; SR00270; CALCITONINA.
SMRNT; SM00113; CALCITONIN, 1.
PROSITE; PS00258; CALCITONIN; 1.
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                                                                                                                  PRT;
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40.6%;
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SEQUENCE 32 AA; 3596 MW;
44.88;
 similarity 44.8
13; Conservative
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                                                                                                                  STANDARD;
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Best Local Similarity
Matches 13; Conserva
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                                                                                                                                                                       Calcitonin.
                                                                                                                 CAL_BOVIN
P01260;
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P01259;
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   Best Local
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CAL_PIG
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MEDLINE=21016719; Pubmed=11130712;
MEDLINE=21016719; Pubmed=11130712;
White 0., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y.,
White O., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y.,
Chung M.K., Chin A., Chao Q., Chen H., Cheuk R.F., Chin C.W.,
Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,
Dunn P., Etgu P., Feldblyum T.V., Feng J.-D., Fong B., Fujii C.Y.,
Gill J.E., Goldsmith A.D., Haas B., Hansen N.F., Hughes B., Huizar L.,
Hunter J.L., Jenkins J., Johnson-Hoppson C., Khan S., Khaykin E.,
Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,
Langin-Hooper S., Lee A., Lee J.M., Lenz C.A., Li J.H., Li Y.-P.,
                       Barg W.F. Jr., Englert M.E., Davies M.C., Colucci D.F., Snedeker E.H., Dziobkowski C., Bell P.H.; "Degradation and structure of porcine calcitonin-1."; Blochemistry 9:1671-1676(1970).
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01-MAY-1992 (Rel. 22, Last sequence update)
01-MAY-1992 (Rel. 22, Last sequence update)
15-JUN-2002 (Rel. 21, Last annotation update)
Phosphoribulokinase, chloroplast precursor (EC 2.7.1.19)
(Phosphopentokinase) (PRKASE) (PRK).
AT1G32060 OR T12021.4.
Arabidopsis thaliana (Mouse-ear cress).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                          MEDLINE=69012693; PubMed=5693288;
Neher R., Riniker B., Zuber H., Rittel W., Kahnt F.W.;
"Thyrocalcitonin. II. Structure of alpha-thyrocalcitonin.";
Helv. Chim. Acta 51:917-924(1968).
-:- FUNCTION: CAUSES A RAPID BUT SHORT-LIVED DROP IN THE LEVEL OF
CALCIUM AND PHOSPHATE IN BLOOD BY PROMOTING THE INCORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33.3%; Score 61; DB 1; Length 32; 40.6%; Pred. No. 0.018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMIDATION.
EDE755ED2FE6EA09 CRC64;
                                                                                                                                                                                                                                                         OF THOSE IONS IN THE BONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       395
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InterPro; IPR001693; Calcitonin-11ke.
InterPro; IPR001935; Calcitonin_A.
Pfam; PF00214; Calc_GRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
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MEDLINE=91329732; PubMed=1651130;
           MEDLINE=70161016; PubMed=5462122;
                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00113; CALCITONIN; 1. PROSITE; PS00258; CALCITONIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32 AA; 3607 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 40.6
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       · STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Hormone; Amidation.
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SEQUENCE
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Nature CATALYTIC ACTIVITY: ATP + D-ribulose 5-phosphate = ADP + D-ribulose 1,5-bisphosphate Libulose 1,5-bisphosphate Libulose 1,5-bisphosphate Libulose 1,5-bisphosphate Nature CATALYTION LIBURE REGULATION LIBURE REGULATION CONTRACTION OF SULFHYDRYL/DISULFIDE GROUPS.
Lin X., Liu S.X., Liu Z.A., Luros J.S., Maiti R., Marziali A., Malitscher J., Miranda M., Nquyen M., Nlerman W.C., Osborne B.I., Pad G., Peterson J., Pham P.K., Rizzo M., Rooney T., Rowley D., Sakano H., Salzberg S.L., Schwartz J.R., Shinn P., Southwick A.M., Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D., Witterback T., Van Aken S., Vaysberg M., Vysotskaiau V.S., Walker M., Wu D., Yu G., Fraser C.M., Venter J.C., Davis R.W.; "Sequence and analysis of chromosome I of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; ACOTATOS ACTION AND ACTION ACTIO
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    -!- PATHWAY: Calvin cycle.
    -!- SIMILARITY: BELONGS TO THE PHOSPHORIBULOKINASE FAMILY.

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BY SIMILARITY.

4660A92EF7E39BC6 CRC64;
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Search completed: May 30, 2003, 09:50:56 Job time: 24 secs

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| Copyright (c) 1993 | | |
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OM protein - protein search, using sw model

| | updates/sec |
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| May 30, 2003, 09:51:24 ; Search time 18 Seconds | <pre>(without alignments) 191.200 Million cell updates/sec</pre> |
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SEQ1 183 1 mcsnlstcvlgklsqelhklqtyprtntgsgtpg 34 score: Sequence: Title: Perfect

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

383519 seqs, 101223694 residues Searched: 383519 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 08
Maximum Match 1008
Listing first 45 summaries

Database :

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Description | Sequence 15, Appl | Sequence 16, Appl | Sequence 17, Appl | Sequence 18, Appl | Sequence 20, Appl | Sequence 10, Appl | Seguence 21, Appl | Sequence 17, Appl | Sequence 12, Appl | | | | Seguence 24, Appl | | | | | | Sequence 22, Appl |
|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|-------------------|
| ID | US-09-847-712-15 | US-09-847-712-16 | US-09-847-712-17 | US-09-847-712-18 | US-09-852-870A-20 | US-09-847-712-10 | US-09-852-870A-21 | US-10-131-543-17 | US-09-847-712-12 | US-09-852-870A-17 | US-10-131-543-26 | US-10-131-543-25 | US-10-131-543-24 | US-09-852-870A-16 | US-10-131-543-12 | US-10-131-543-20 | US-10-131-543-23 | US-10-131-543-19 | US-10-131-543-22 |
| th DB | 32 10 | 32 10 | 32 10 | 32 10 | 32 9 | 32 10 | 32 9 | 34 9 | 32 10 | 32 9 | 35 9 | 34 9 | 35 9 | 32 9 | 31 9 | 35 9 | 35 9 | 34 9 | 34 9 |
| Query Match Length DB | 94.0 | 94.0 | 94.0 | 94.0 | 88.5 | 86.9 | 86.3 | 83.1 | 82.5 | 81.4 | 80.9 | | | | | | 74.9 | 74.6 | 74.6 |
| Score | 172 | 172 | 172 | 172 | 162 | 159 | 158 | 152 | 151 | 149 | 148 | 147.5 | 147 | 145 | 144 | 137 | 137 | 136.5 | 136.5 |
| Result No. | П | 7 | e | 7 | 2 | φ | 7 | 8 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| 222128 222178 11888 12222178 11888 11722221 | Sequence 18, Appl Sequence 22, Appl Sequence 3, Appli Sequence 11, Appli Sequence 11, Appli Sequence 13820, A | |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--|
| 00000 0000 | 9 US-09-852-870A-18 10 US-09-813-345-22 10 US-09-746-945-3 10 US-09-847-712-11 10 US-09-815-242-13820 | |
| 40000000000000000000000000000000000000 | 32 25 11 32 664 | |
| 44444444444444444444444444444444444444 | 466.4 400.4 32.8 30.6 | |
| 136.5 136 136 136 123.5 108 100 100 100 100 100 100 100 100 100 | 2887 400 600 800 800 | |
| 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | .44444 .44444 | |

ALIGNMENTS

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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature; NAME/KEY: misc_feature; Satmon CF; LOCATION: (32); OTHER INFORMATION: An Fc domain attached at the C-terminus US-09-847-712-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Preferred embodiments - salmon CT
          Sequence 15, Application US/09847712

Patent No. US20020090646A1

GENERAL INFORMATION:
APPLICANT: LIU, CHUAN-FA

APPLICANT: LIU, CHUAN-FA

APPLICANT: MARSHALL, WILLIAM S.

APPLICANT: MARSHALL, WILLIAM S.

TITLE OF INVENION: CALCITONIN-RELATED MOLECULES

FILE REFERENCE: A-684

CURRENT APPLICATION NUMBER: 05/09/847,712

CURRENT FILING DATE: 2001-05-02

PRIOR PILING DATE: 2000-05-03

PRIOR FILING DATE: 2000-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
94.0%; Score 172; DB 10;
Best Local Similarity 100.0%; Pred. No. 3.2e-17;
Matches 32; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 16, Application US/09847712; Patent No. US2002009646A1
GENERAL INFORMATION: APPLICANT: LIU, CHUNN-FA
                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn version 3.1
SEQ ID NO 15
LENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
US-09-847-712-16
US-09-847-712-15
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OTHER INFORMATION: Preferred embodiments - salmon CT
NAME/KEY: misc_feature
LOCATION: (1)..(1)
OTHER INFORMATION: For domain attached at the C-terminus
NAME/KEY: misc_feature
LOCATION: (32)..(32)
OTHER INFORMATION: Position 32 is linked to an identical peptide sequence through
OTHER INFORMATION: optional linker
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US-09-852-870A-20
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                           TITLE OF INVENTION: CALCITONIN-RELATED MOLECULES
FILLE REPERENCE: A-684
CURRENT APPLICATION NUMBER: US/09/847,712
CURRENT FILING DATE: 2001-05-02
PRIOR PILING DATE: 2000-05-03
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTIN VETSION 3.1
SEQ ID NO 18
LENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 172; DB 10;
Pred. No. 3.2e-17;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20, Application US/09852870A
Patent No. US20020165132A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Goodman, Murray
APPLICANT: Goodman, Murray
APPLICANT: Ocapay, George
TITLE OF INVENTION: Lanthhonin Bridged Proteins
FILE BEFERNER: 18912-D
CURRENT APPLICATION NUMBER: US/09/852,870A
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: uS 09/384,601
PRIOR APPLICATION NUMBER: uS 09/384,601
PRIOR FILING DATE: 1999-08-26
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PATENTIN VERSION 3.0
LENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 162; DB 9
Pred. No. 8e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.0%; SC
ilarity 100.0%; P
Conservative 0;
                  MARSHALL, WILLIAM S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: LIU, CHUAN-FA
APPLICANT: MARSHALL, WILLIAM S.
                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.5%;
96.9%;
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Best Local Similarity 96.9
Matches 31; Conservative
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Best Local Similarity
Matches 32; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-852-870A-20
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NAME/KEY: misc_feature
LOCATION: (32)...(33)...(33)...(32)
OTHER INFORMATION: Position 32 is linked to an identical peptide sequence through an OTHER INFORMATION: optional linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Preferred embodiments - salmon CT:
NAME/KEY: misc_feature
LOCATION: (1)..(1)
OTHER INFORMATION: Fc domain attached at the N-terminus
US-09-847-712-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: LIU, CHUAN-FA
APPLICANT: LIU, CHUAN-FA
APPLICANT: MILLIAM S.
APPLICANT: MILLIAM S.
APPLICANT: REYNOLDS, ANGELA
TITLE OF INVENTION: CALCITONIN-RELATED MOLECULES
FILE REFERENCE: A-684
CURRENT APPLICATION NUMBER: US/09/847,712
CURRENT FILING DATE: 2001-05-02
PRIOR FILING DATE: 2000-05-03
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PALENTIN NOS: 26
SOFTWARE: PALENTIN VEFSION 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                               94.0%; Score 172; DB 10;
100.0%; Pred. No. 3.2e-17;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.0%; Score 172; DB 10;
100.0%; Pred. No. 3.2e-17;
tive 0; Mismatches 0;
                                                CALCITONIN-RELATED MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
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                      APPLICANT: REYNOLDS, ANGELA
TITLE OF INVENTION: CALCITONIN RELATED MOI
FILE REFERENCE: A -684
CURRENT APPLICATION NUMBER: US/09/847,712
CURRENT FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: 60/201,511
PRIOR FILLING DATE: 2000-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 17, Application US/09847712
Patent No. US20020090646A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 18, Application US/09847712
Patent No. US20020090646A1
GENERAL INFORMATION:
      MARSHALL, WILLIAM S.
                                                                                                                                                                         NUMBER OF SEQ ID NOS: 26
SOFWARE: Patentin version 3.1
SEQ ID NO 32
LENCTH: 32
                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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Matches 32; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 32, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
US-09-847-712-17
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APPLICANT:
                                                                                                                                                                                                                                                                   TYPE: PRT
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Score 151; DB 10;
Pred. No. 2.7e-14;
4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 152; DB 9;
Pred. No. 2.1e-14;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: LIU, CHUAN-FA
APPLICANT: LIU, CHUAN-FA
APPLICANT: MARSHALL, WILLIAM S.
APPLICANT: REYNOLDS, ANGELA
TITLE OF INVENTION: CALCITONIN RELATED MOLECULES
FILE REFERENCE: A-684
CURRENT APPLICATION NUMBER: US/09/847,712
PRIOR APPLICATION NUMBER: 60/201,511
PRIOR FILING DATE: 2000-05-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                George
Lanthionin Bridged Proteins
                                                                                                                                                                                                                                                                              OTHER INFORMATION: Xaa = Hhc: Homohomocysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 SNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 SNLSTXVLGKLSQELHKLQTYPRINTGSGTP 31
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  FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                - epsilon-Lysine
                                                                                                                            OTHER INFORMATION: Synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 17, Application US/09852870A Patent No. US20020165132A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-847-712-12; Sequence 12, Application US/09847712; Patent No. US20020090646A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.1%;
96.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82.5%;
84.4%;
                                                                TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 82.55
Best Local Similarity 84.45
Matches 27; Conservative
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TITLE OF INVENTION: Lanthic
FILE REFERENCE: LKR 9122-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murray
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                                                                                                                                                                                                                                                                                                                                          LOCATION: 32
OTHER INFORMATION: Xaa
                                                                                                                                                                      NAME/KEY: ACETYLATION
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nes 30; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Goodman,
APPLICANT: Osapay,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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                                                                                                                                                                                                                                    NAME/KEY: VARIANT
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US-10-131-543-17
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SOFTWARE: Fa
SEQ ID NO 17
LENGTH: 34
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Matches
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Publication No. US2003007270941

GENERAL INFORMATION:

APPLICANT: Cyr, John E.

APPLICANT: Pearson, Daniel A.

TITLE OF INVENTION: STABLIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS

TITLE OF INVENTION: USING HYDROPHILIC THIOFTHERS

FILE REFERENCE: 09744-016001

CURRENT APPLICATION NUMBER: US/10/131,543

CURRENT APPLICATION NUMBER: US 09/694,992

PRIOR FILING DATE: 2000-10-24

PRIOR FILING DATE: 2000-10-24

PRIOR FILING DATE: 2001-10-24

PRIOR FILING DATE: 2001-10-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Cys-Ser lanthionine bridge between Cys and second Ser US-09-852-870A-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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Best Local Similarity 93.8%; Pred. No. 2.9e-15;
Matches 30; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Osapay, George,
TITLE OF INVENTION: Lanchionin Bridged Proteins
FILE REFERENCE: LKR 9122-D
CURRENT APPLICATION NUMBER: US/09/852,870A
PRIOR PAPLICATION NUMBER: US 09/384,601
PRIOR APPLICATION NUMBER: US 09/384,601
NUMBER OF SEQ ID NOS: 24
SCFTWARE: Patentin version 3.0
SEQ ID NO 21
LENGTH: 32
                                                                                                                                                                                                                                                                                                                   Score 159; DB 10;
Pred. No. 2.1e-15;
2; Mismatches 1;
               TITLE OF INVENTION: CALCITONIN-RELATED MOLECULES FILE REFERENCE: A-684
CURRENT APPLICATION NUMBER: US/09/847,712
CURRENT FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: 60/201,511
PRIOR FILING DATE: 2000-05-03
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin.version 3.1
SEQ ID NO 10
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                                                                                                                                                                                                                                                                                                                   86.9%;
90.6%;
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  REYNOLDS, ANGELA
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Best Local Similarity 90.6
Matches 29; Conservative
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APPLICANT: GOODMAN, MULTAY
APPLICANT: OSADAY, GEOTGE
                                                                                                                                                                                                                                                     ; ORGANISM: eel
US-09-847-712-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-852-870A-21
                                                                                                                                                                                                                                    TYPE: PRT
APPLICANT:
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Length 34; Indels .; 0

Gaps

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Length 32;

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NAME/KEY: ACETYLATION
LOCATION: 1, 14
FEATURE:
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Best Local Similarity
Matches 30; Conserva
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Best Local Similarity
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US-10-131-543-25
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US-10-131-543-24
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Fublication No. US2003007270941
GENERAL INFORMATION:
APPLICANT: Cyr, John E.
APPLICANT: Cyr, John E.
TITLE OF INVENTION: SPREILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS
TITLE OF INVENTION: SPREILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS
TITLE OF INVENTION: SPREILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS
TITLE OF INVENTION: USING HYDROPHILIC THIOFTHERS
FILE REFERENCE: 09744-016001
CURRENT APPLICATION NUMBER: US/10/131,543
CURRENT FILING DATE: 2000-10-24
FRIOR FILING DATE: 2001-10-24
FRIOR FILING DATE: 2001-10-24
NUMBER OF SEQ ID NOS: 29
SOFTWARE: FRACE FURNOW VERSION 4.0
SEQ ID NO 26
LENGTH: 35
                                                                                                                                                                                                                   ; OTHER INFORMATION: Cys-Ser lanthionine bridge between Cys and third Ser US-09-852-870A-17
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                 Query Match . 81.4%; Score 149; DB 9; Length 32; Best Local Similarity 87.5%; Pred, No. 5.2e-14; Matches 28; Conservative 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80.9%; Score 148; DB 9; Length 35; 85.7%; Pred. No. 7.9e-14; Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 SNLSTCVLGKLS----QELHKLQTYPRINTGSGTP 33
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OTHER INFORMATION: Xaa = epsilon-Lysine
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: US 09/384,601
PRIOR FILING DATE: 1999-08-26
NUMBER OF SEQ ID NOS: 24
SEQ ID NO 17
LENGTH: 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : Sequence 25, Application US/10131543; Publication No. US20030072709A1; GENERAL INFORMATION:
                                                                                                                                                     TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 80.9
Best Local Similarity 85.7
Matches 30; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: ACETYLATION
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; LOCATION: 17, 35
US-10-131-543-26
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NAME/KEY: VARIANT
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US-10-131-543-26
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APPLICANT: Pearson, Daniel A.

TITLE OF INVENTION: STABILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS
TITLE OF INVENTION: USING HYDROPHILIC THIOETHERS
FILE REFRENCE: 09744-016001
CURRENT APPLICATION NUMBER: US/10/131,543
CURRENT APPLICATION NUMBER: US 09/694,992
PRIOR APPLICATION NUMBER: US 09/694,992
PRIOR FILING DATE: 2000-10-24
PRIOR FILING DATE: 2001-10-24
NUMBER OF SEQ ID NOS: 29
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 25
LENGTH: 34
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Sequence 24, Application US/10131543

Sequence 24, Application US/10131543

Publication No. US20330072709A1

GENERAL INFORMATION:

APPLICANT: Cyr, John E.

APPLICANT: Pearson, Daniel A.

TITLE OF INVENTION: STABILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS

TITLE OF INVENTION: STABILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS

FILE REFERENCE: 09744-01601

CURRENT PAPLICATION NUMBER: US/10/131,543

PRIOR FILING DATE: 2002-04-4

PRIOR FILING DATE: 2002-10-24

PRIOR FILING DATE: 2001-10-24

NUMBER OF SEQ ID NOS: 29

SEQ ID NO 24

LENGTH: 35
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LOCATION: 14
OTHER INFORMATION: beta-Dap: 2,3 diaminopropionic acid residue
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Pred. No. 1.1e-13;
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88.2%; Pred. No. 9e-14;
iive 1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic construct
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ORGANISM: Artificial Sequence
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ORGANISM: Artificial Sequence
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Publication No. US20030072709A1

Sequence 12, Application S/10131543

Publication No. US20030072709A1

GENERAL INFORMATION:

APPLICANT: Cyr, John E.

TITLE OF INVENTION: STABILIZATION OF RADIOPHARMACEUTICAL COMPOSITIONS

TITLE OF INVENTION: USING HYDROPHILIC THIOFTHERS

FILE REPERENCE: 0974-016001

CURRENT APPLICATION NUMBER: US/10/131,543

CURRENT PILING DATE: 2002-04-24

PRIOR APPLICATION NUMBER: US 09/694,992

PRIOR PILING DATE: 2001-10-24

PRIOR PILING DATE: 2001-10-24

NUMBER OF SEQ ID NOS: 29

SOFTWARE: FRACE FRACEO FOR Windows Version 4.0

SEQ ID NO 12

LENGTH: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Cys-Ser lanthionine bridge between Cys and second Ser US-09-852-870A-16
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  Gaps
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Indels
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                                                                                                                                                             US-09-852-870A-16
Sequence 16, Application US/09852870A
Sequence 16, Application US/09852870A
Sequence 16, Application US/09852870A
Setent No. US20020165132A1
GENERAL INFORMATION;
APPLICANT GOOdman, Murray
APPLICANT GOODMAN, Murray
TITLE OF INFORMION: Lanthionin Bridged Proteins
FILE REFERENCE: LKR 9122-D
CURRENT FILING DATE: 2001-05-10
CURRENT FILING DATE: 1999-08-26
SPRIOR FILING DATE: 1999-08-26
NUMBER OF SEQ ID NOS: 24
                                                            3 SNLSTCVLGKLS----QELHKLQTYPRINTGSGTP 33
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OTHER INFORMATION: Xaa = Hhc: Homohomocysteine
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SEQ ID NO 16
LENGTH: 32
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30; Conservative
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Matches
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OM protein - protein search, using sw model

May 30, 2003, 09:49:41; Search time 35 Seconds (without alignments) 129.443 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

SEQ1 183 1 mcsnlstcvlgklsgelhklqtyprtntgsgtpg 34

Scoring table:

BLÖSUM62 Gapop 10.0 , Gapext 0.5

908470 Total number of hits satisfying chosen parameters: 908470 segs, 133250620 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

A_Geneseq_101002:*

1. (SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
2. (SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
3. (SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
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149. (SIDS2/gcgdata/geneseqg/geneseqg-emb1/AA1993.DAT:*
159. (SIDS2/gcgdata/geneseqg/genes

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| Description | Fish calcitonin de Salmon calcitonin Salmon calcitonin-Sequence of salmon Partial protein se Synthetic CT peptisalmon calcitonin. [Met 0]-salmon cal [Leu 0]-salmon cal [Met 0, Leu 8]-sal |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SUMMARIES | AAP60792 AAP80414 AAP81041 AAP81041 AAR81041 AAR81041 AAR80814 AAR80334 AAR30314 |
| h DB | 24 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 |
| Lengt | |
| % Query Match Length DB | 100.0 100.0 100.0 100.0 97.3 97.3 96.7 |
| Score | 183 183 183 183 178 178 174 |
| Result No. | 1084327 |

85JP-0130815. 84JP-0170492. 85JP-0098891.

18-JUN-1985; 17-AUG-1984; 11-MAY-1985;

| CHILD | | | | | | | |
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| on 8-Methi | 83 | 7 | 32 | α. | σ | vo | 45 |
| [Ile 0, Leu 8]-sa | 3031 | 13 | 33 | ζ. | σ'n | 7 | 44 |
| , Leu 8]-s | 3031 | 13 | 33 | Ŕ | O, | 7 | 43 |
| 0,8]-salmon | 331 | 13 | 33 | m. | o | 7 | 42 |
| Fc-calcitoni | AAE14335 | 3 | 271 | 4 | σ'n | 7 | 41 |
| | AAE14326 | $^{\circ}$ | o | 4 | σ | 7 | 40 |
| | AAE14325 | 3 | 64 | 4 | σ | 7 | 39 |
| | AAR20042 | 3 | 35 | 4 | on | 7 | 38 |
| | AAR30346 | 3 | 33 | 4 | σ'n | 7 | 37 |
| | AAR30345 | m | 33 | ₹. | on | ^ | 36 |
| | AAR30344 | 3 | 33 | 4. | on | 7 | 35 |
| | AAR30343 | 3 | 33 | ÷. | 0 | ~ | 34 |
| | AAR30342 | m | 33 | | O | . 1 | 33 |
| | AAE14324 | ~ | 32 | 4 | . 0 | . ^ | 32 |
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| Calcitoning (CT) | AAR91046 | 22 | 300 | 4.4 | 'nσ | 172 | 30 |
| | AAW73587 | 0 | 32 | | σ, | ~ 1 | 28 |
| | AAW93528 | 0 | 32 | ÷ | 0 | ~ | 27 |
| | AAY04000 | 0 | 32 | <u>.</u> | 6 | ~ | 56 |
| | AAW22542 | æ | 32 | <u>.</u> | 0 | ~ | 25 |
| | AAW10575 | ~ | 32 | <u>.</u> | σ | ~ | 24 |
| | AAR84250 | 8 | 32 | ٠. | 0 | \sim | 23 |
| | AAR86858 | 2 | 32 | | σ | 7 | 22 |
| | AAR60152 | 1O | 32 | - | 0 | ~ | 21 |
| | AAR59791 | 10 | 32 | - | 0 | ^ | 20 |
| | AAR59790 | FU. | 32 | | 6 | ~ | 1.9 |
| | AAR47664 | m | 32 | _: | 6 | ^ | 18 |
| | AAR36987 | ₹* | 32 | _: | σ | \sim | 17 |
| | AAP71487 | | 32 | _: | 6 | \sim | 16 |
| | AAP71360 | | . 32 | | 9 | ~ | 15 |
| | AAP40289 | | 32 | _: | 6 | \sim | 14 |
| | AAP20308 | | 32 | | 6 | \sim | 13 |
| | AAR30340 | m | 33 | | 0 | _ | 12 |
| | AAR30339 | 3 | 33 | _: | 9 | \sim | 11 |

ALIGNMENTS

2..34 /label= Peptide of claim 8 Val /label= May be Ser or Ala or 'label= May be Asn or Location/Qualifiers /label= May be Thr AAP60792 standard; Protein; 34 AA 85WO-JP00459 Fish calcitonin derivative. (first entry) Misc-difference 28 Misc-difference 30 pSCT1; E.coli RR1. Misc-difference 27 16-AUG-1985; 17-JUL-1991 WO8601226-A 27-FEB-1986 Synthetic. AAP60792; Key Protein RESULT 1

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Gaps
This salmon calcitonin protein is produced as a fusion protein. The process can also be used to produce e.g. interferon and proinsulin.
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Use of oligonucleotides with a hairpin loop primer avoids the ne for femrically synthesising both strands. Also the filling in stean be performed using labelled nucleotides to give products suitable for use as probes. Mutagenic primers can be used to introduce site specific mutations.

See also AAN81267 and AAN81268.
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                                                                                                                                          Length 34;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3' terminal hairpin loop; double stranded DNA synthesis; salmon calcitonin-Gly 33.
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100.0%; Pred. No. 5.4e-17;
Live 0; Mismatches 0;
                                                                                                                                          Query Match
100.0%; Score 183; DB 9;
Best Local Similarity 100.0%; Pred. No. 5.4e-17;
Matches 34; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; ; pp; German.
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N-PDSB; N81269
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FARH ) HOECHST AG.
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Best Local Similarity
Matches 34; Conserv
                                                                                        34 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence encodes a fish calcitonin derivative which may be used for the construction of expression vector pSCT1 capable of transforming an E.coli host for the efficient large scale expression of the product.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Biologically active fish calcitonin contg. extra glycine at C-terminal - convertible to natural form and prepd. using E.coli recombinant transform.
                                                                                                                                                                                                                                                                   Saito A, Ikushima N;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Salmon calcitonin produced by recombinant methods.
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Matsumoto R, Watanabe K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 1; 106pp; Japanese.
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                                                       (SAGA ) SAGAMI CHEM RES CENTRE.
JCENG ) CENTRAL GIASS KK.
(HODO ) HODGGAYA CHEMICAL KK.
(KITES ) NIPPON SODA KK.
(MISC ) NISSAN CHEMICAL INDS LTD.
(TOYJ ) TOYO SODA MFG KK.
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N-PSDB; AAN60710.
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N-PSDB; AAN80970.
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   28-MAY-1985;
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19-FEB-1988;
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Pri Madard; protein; 34 AA.
1 2003
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Sequence of salmon calcitonin I having an additional C-terminal glycine.

Hypocalcaemic; hypophosphateamia peptide hormone; pancreatitis therapy.

Uhlmann E; Muller H,

Salmon calcitonin I derivs. prepn. .
by inserting new plasmid encoding for the deriv. into e.g. Bscherichia coli gene

Calcitonin is a hypocalcaemic and hypophosphataemia peptide hormone which regulates serum levels of Ca. It is useful for treating Ca metabolic disorders, as an analgesic and for treating acute pancreatitis inhibiting enzyme secretion.

Gaps ; 0 Length 34; Indels Query Match
Best Local Similarity 100.0%; Pred. No. 5.4e-17;
Matches 34; Conservative 0; Mismatches 0;

pp δ

AAB61575 standard; Protein; 53 AA. RESULT 5
AAB61575
TO AAB61575
XX AAB66
XXX
XXX
XXX
XXX
XXX
XX Tran
XXX
XX WO20
XXX
XX YO20
PP PO 04-3-37
PF 23-31
PR 110-A

(first entry) 03-APR-2001

AAB61575;

Partial protein sequence of pCLYSM.

Transgenic; milk; lysozyme; pCLYSM; salmon; calcitonin.

Unidentified.

WO200100855-A1.

04-JAN-2001

23-JUN-2000; 2000WO-GB02459.

99GB-0014733. 23-JUN-1999;

(PPLT-) PPL THERAPEUTICS SCOTLAND LTD.

McCreath GE;

WPI; 2001-137958/14. N-PSDB; AAF28653.

Producing peptides for use as medicaments, nutritional additives or research tools, comprises expressing a fusion protein, which contains the peptide linked to a lysozyme fusion partner protein, in the milk of a transgenic mannal.

Example 1; Fig 1; 57pp; English.

The present invention relates to a method for producing a peptide. The method. comparises expressing in the milk of a transgenic non-human placental mammal a fusion protein, comprising the peptide to be expressed linked to lysozyme (a fusion partner protein). The method is useful for producing proteins or peptides that are useful as medicaments, or nutritional additives or research tools. The present sequence is a partial DNA sequence of pcluxSM. pcltSM was designed to express a human calcitonin fusion protein in the milk of transgenic animals. The fusion protein allows the release of calcitonin from the end of a linker arm fused to the lysozyme c terminal by expangen bromide of a linker arm fused to the lysozyme c terminal by cyanogen bromide of a linker arm fused to the lysozyme gene, peptide linker (see AAB61572). CNBr cleavage site and salmon calcitonin coding sequence, ovine BLG 3' CNPR, polyadenylation atte and lanking region, chick alpha-globin insulator regions and the pdCIS bacterial plasmid vector. The present insulator regions and the pdCIS bacterial plasmid vector. The present sequence is a partial protein sequence of pcLYSM comprising the peptide linker, the CNBr cleavage site and the calcitonin peptide sequence.

Sequence

Gaps 0; Length 53; Indels Query Match 100.0%; Score 183; DB 22; Best Local Similarity 100.0%; Pred. No. 8.7e-17; Matches 34; Conservative 0; Mismatches 0;

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δλ Op

0

ABB08914 standard; peptide; 33 AA

16-JUL-2002 (first entry)

Synthetic CT peptide sCT(Gly).

TMF: tumour necrosis factor; beta-sheet; fusion protein; recombinant production; Escherichia coll; INF fusion vector; pr7-T150; pr7-T57; CT; sCT; pr150-SCT(GLY).

Synthetic.

KR133475-B1

21-APR-1998

94KR-0007018. 04-APR-1994;

94KR-0007018. 04-APR-1994;

(HANI-) HANIL SYNTHETIC FIBER CO LTD.

Kang S; Shin H, Jang S, Kim D,

WPI; 1999-617508/53.

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                                                                                                                                                                                                                                                136 AA;
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                                                                                                                                                                                                                                                  Sequence
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Complex useful for transporting active agent through epithelial barrier, has biologically active portion and target element directed bligand that confers e.g. transcytctic properties to agent specific to Agand
                                                                                           The invention relates to a method for the recombinant production of proteths, involving the fusion of a leader sequence capable of forming a beta-sheet to a desired protein. In particular, a protein of interest is expressed in Escherichia coli as a fusion with a beta-sheet forming portion of human tumour necrosis factor (TNF) see ABB08912), and the TNF fusion vectors pr7-7150 and pr7-757 are used to accomplish this. The present sequence represents a synthetic CT (not defined) peptide designated sCTY(Gly), which is a component of the TNF-SCTY(Gly) fusion protein encoded by the TNF fusion vector pT150-SCTY(Gly).
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mon described a complex or compound (I) comprising a vactive portion and a target element (II) directed to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chapin S, Basu A;
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0
           Use of beta-sheet forming amino acid leader sequence for the production of proteins -
                                                                                                                                                                                                                                                                                                               Length 33;
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                               97.3%; Score 178; DB 20; ilarity 100.0%; Pred. No. 2.4e-16; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Houston LL, Sheridan PJ, Hawley S, Glynn JM,
                                                                                                                                                                                                                                                                                                                                                                                                 1 CSNLSTCVLGKLSOELHKLOTYPRINTGSGTPG 33
                                                                                                                                                                                                                                                                                                                                                                               2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e 15; Fig 10; 379pp; English.
                                                              Example 3-A; Page 7; 14pp; Korean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABG60636 standard; Protein; 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-OCT-2000; 2000US-237929P.
13-NOV-2000; 2000US-248478P.
14-NOV-2000; 2000US-248819P.
09-FEB-2001; 2001US-267601P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-OCT-2001; 2001WO-US30832.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-AUG-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-416628/44.
N-PSDB; ABK81195.
                                                                                                                                                                                                                                                                                                                         Local Similarity es 33; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Salmon calcitonin.
                                                                                                                                                                                                                                                                                33 AA;
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                                                                                                                                                                                                                                                                                  Sequence
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Matches
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ligand that confers transcellular, transcytotic or paracellular transporting properties to an agent specifically bound to the ligand, where (II) is not an antibody. Alternatively, (I) comprises two or more (II) directed to one or more ligands. (I) is useful for delivering a biologically active agent to an animal, for transporting an active agent through an epithelial or mucosal barrier, and for treating or experimental an epithelial or mucosal barrier, so the respiratory system including lung cancer and tumours, as than pathogenic infections, allergy-related disorders, gastrointestinal tract disorders, disorders and any disease or disorder involving polyimmunoglobulin receptor (pigR) displaying cells. This is the amino acid sequence of a protein associated with the transport of biologically active agents across cellular
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCT; calcium regulation; thyroid gland; hormone; bone resorption
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New synthetic calcitonin peptide(as) are hypocalcaemic agents -
for treating Paget's disease, osteoporosis, bone fracture, etc.
with lower immuogenicity than natural calcitonin(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    i.e. additional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This hypocalcaemic peptide is an example of novel calcitonin analogues which have amino acid additions at the N-terminal which, alone or with other substitutions, and with deletions at other residues, act to improve potency, prolong duration of the hormonal effect and increase oral or masal
                                                                                                                                                                                                                                                                                                                                  Score 178; DB 23; Length 136;
Pred. No. 1.1e-15;
                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                  ## CSNLSTCVLGKLSQELHKLQTYPRINTGSGTPG 115
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N-terminal amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                              97.3%; SCOLE 100.0%; Pred. NO. 1.1.
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                                                                                                                                                                                                                                                                                                                                                       Similarity 100.
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0; Gaps Length 33; 0; Indels Match 96.7%; Score 177; DB 13; Local Similarity 100.0%; Pred. No. 3.2e-16; les 33; Conservative 0; Mismatches 0; Sequence 33 AA; Query Match Best Loc Matches

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sCT; calcium regulation; thyroid gland; hormone; bone resorption. Ä AAR30338 standard; peptide; 33 30-APR-1993 (first entry) [Leu 0]-salmon calcitonin. AAR30338; RESULT 9

_note= "designated position 0, i.e. additional N-terminal amino acid " $% \frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1}$ Location/Qualifiers /note= "amidated" 33.8 Key Misc-difference Disulfide-bond Modified-site Salmon.

92WO-US04854. 910S-0711180. Basava C, Hostetler KY; (VICA-) VICAL INC. 03-JUN-1992; 05-JUN-1991; 10-DEC-1992

New synthetic calcitonin peptide(as) are hypocalcaemic agents for treating Paget's disease, osteoporosis, bone fracture, etc. with lower immunogenicity than natural calcitonin(s)

WPI; 1992-433374/52.

Claim 3; Page 28; 42pp; English.

This hypocalcaemic peptide is a specifically claimed example of Cacitionin analogues which have amino acid additions at the N-terminal which, alone or with other substitutions, and with deletions at other residues, act to improve potency, prolong duration of the hormonal effect and increase oral or masal bioavallability, c.f. native CTs. The analogues can be used to reduce or normalise serum calcium levels or to influence bone metabolism. They are thus useful for treating e.g. Vitamin D intoxication, hyperparathyroidism, idiopathic hypercalcaemia of infancy, bone fracture, rickets, osteoporosis and bone pain.

Gaps sCT; calcium regulation; thyroid gland; hormone; bone resorption. This hypocalcaemic peptide is an example of novel calcitonin analogues which have amino acid additions, and with acteminal which, alone or with other substitutions, and with deletions at other residues, act to improve potency, prolong duration of the hornonal effect and increase oral or masal bloavaliability. c.f. native CTs. The analogues can be used to metabolism. They are thus useful for treating e.g. Vitamin D intoxication, hyperparathyroidism, idiopathic hypercalcaemia of infancy, bone fracture, rickets, osteoporosis and bone pain associated with those diseases or with articular rheumatism. The peptides also inhibit gastrin secretion making them useful to New synthetic calcitonin peptide(as) are hypocalcaemic agents - for treating Paget's disease, osteoporosis, bone fracture, etc. with lower immunogenicity than natural calcitonin(s) 0; /note= "designated position 0, i.e. additional N-terminal amino acid " associated with these diseases or with articular rheumatism. T peptides also inhibit gastrin secretion making them useful to treat acute pancreatitis and gastrointestinal disorders, esp. gastric ulcers. Query Match
Best Local Similarity 97.0%; Pred. No. 8e-16;
Matches 32; Conservative 1; Mismatches 0; Indels /note= "designated position 8 in sCT, Leu replaces Val" 1 MCSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33 1 LCSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33 Location/Qualifiers 1 Example 16c; Page 28; 42pp; English. AA. 33 /note= "amidated" [Met 0, Leu 8]-salmon calcitonin. AAR30314 standard; peptide; 33 92WO-US04854. 91US-0711180. 30-APR-1993 (first entry) Basava C, Hostetler KY; 2..8 WPI; 1992-433374/52. (VICA-) VICAL INC. 33 AA; Misc-difference Misc-difference Disulfide-bond Modified-site 03-JUN-1992; 05-JUN-1991; W09221369-A. Sequence AAR30314; Salmon. AARBOOJAA
AARBOOJA
AA RESULT 22222X

Length 33;

94.5%;

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Query Match
Best Local Similarity 97.0
Matches 32; Conservative
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Modified-site
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AAR30340
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sCT; calcium regulation; thyroid gland; hormone; bone resorption.
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for treating Paget's disease, osteoporosis, bone fracture, etc.
with lower immunogenicity than natural calcitonin(s)
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treat acute pancreatitis and gastrointestinal disorders, esp. gastric ulcers.
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Best Local Similarity 97.0%; Pred. No. 8e-16;
Matches 32; Conservative 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MCSNLSTCLLGKLSQELHKLQTYPRTNTGSGTP 33
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                                                                                                                                  33 AA;
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Modified-site
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                                                                                                                                       Seguence
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AAR30339
ID AAR30
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                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This hypocalcaemic peptide is an example of novel calcitorin analogues which have amino acid additions at the N-terminal which, alone or with other substitutions, and with deletions at other residues, act to improve potency, prolong duration of the hormonal effect and increase oral or masal bloavallability, c.f. native CTs. The analogues can be used to reduce or normalise serum calcium levels or to influence bone metabolism. They are thus useful for treating e.g. Vitamin D intoxication, hyperparathyroidism, idiopathic hypercalcaemia of infancy, bone fracture, itckets, osteoporosis and bone pain associated with these diseases or with articular rheumatism. The peptides also inhibit gastrin secretion making them useful to treat acute peancreatitis and gastrointestinal disorders, esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sCT; calcium regulation; thyroid gland; hormone; bone resorption.
                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New synthetic calcitonin peptidé(as) are hypocalcaemic agents -
for treating Paget's disease, osteoporosis, bone fracture, etc.
with lower immungemicity than natural calcitonin(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _hote= "designated position 0, i.e. additional N-terminal amino acid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
94.58; Score 173; DB 13; Length 33;
Best Local Similarity 97.08; Pred. No. 1.1e-15;
Matches 32; Conservative 1; Mismatches 0; Indels
                                                                 Indels
Score 173; DB 13;
Pred. No. 1.1e-15;
1; Mismatches 0;
                                                                                                                           1 MCSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                 1 VCSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MCSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 17b; Page 29; 42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                  AAR30340 standard; peptide; 33 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "amidated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92WO-US04854.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91US-0711180.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [Ile 0]-salmon calcitonin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Basava C, Hostetler KY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1992-433374/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
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The cyclic disulphide peptides of the invention have calcitonin activity. They are prepd. by standard solid phase peptide synthesis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D-arginine (24) salmon and eel calcitonins and intermediates have calcitonin hormone activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
94.0%; Score 172; DB 5; Length 32;
Best Local Similarity 100.0%; Pred. No. 1.4e-15;
Matches 32; Conservative 0; Mismatches 0; Indels
Sequence of D-Arg (24) salmon calcitonin deriv.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
AAP71360
ID AAP71360 standard; peptide; 32 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; column 18; 4pp; English.
                                                                                                                                                                                                                                                                                                                                             /label= Pro-NH2
                                                                                                                                                                                                            dabel- H-Cys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Calcitonin analogue; salmon;
                                                                                                                                                                                                                                                                                        /label - D-Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84US-0667197.
                                                           Hormone; calcitonin analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82US-0422998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82US-0422998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ARMO ) ARMOUR PHARM CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ARMO ) ARMOUR PHARM CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Orlowski RC, Seyler JK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1984-237158/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oncorhynchus keta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence 32 AA;
                                                                                                                                                                                                                                   Disulfide-bond
Modified-site
                                                                                                                                                              Key
Modified-site
                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-SEP-1982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-SEP-1982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US4659804-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                               04-SEP-1984.
                                                                                                         Salmo salar.
                                                                                                                                                                                                                                                                                                                                                                                              US4469632-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAP71360;
         NAME OF STATES O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The modified peptide was produced via a method comprising reartion with a tetrapeptide in a medium contg. buffer soln. at pH 4-10 in the presence of trypsin or trypsin like proteinase. See also AAP20305-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29 Membered polypeptide chain - obtd. by reacting 24 and 4 membered peptide(s) in the presence of trypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
94.0%; Score 172; DB 3; Length 32;
Best Local Similarity 100.0%; Pred. No. 1.4e-15;
Matches 32; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= protected /note= "with H or thiol protecting gp." Disulphide_bond 1..7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              //label= protected //note= "with H or thiol protecting gp."
                                                                                                                                                                                                                                                                                                                     Peptide prepd, by reaction in the presence of trypsin.
         /!!!!!!!!!!!!!!!!!!!!!!!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trypsin; thiol; trypsin-like proteinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1..7
/note= "possible bond"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP40289 standard; protein; 32 AA.
                                                                                                                                                                 peptide; 32 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= amidated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 1; 18pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SAGA ) SAGAMI CHEM RES CENTRE. (TEIK ) TEIKOKU HORMONE MFG LID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1982-14912E/08 (14912E).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80JP-0082788.
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86ES-0556432.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-JAN-1992 (first entry)
                                                                                                                                                                                                                                                                 30-NOV-1992 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 32 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-JUN-1980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP57009748-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-JUN-1980;
23-JUN-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JAN-1982.
                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAP40289;
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AAP40289
ID AAP40:
XX
AC AAP40:
XX
DT 14-JA:
XX
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Gaps

Orlowski RC, Seyler JK, Colescott RL, Stahl GL, Enkoji T, Geever JE,

qq δy

WPI; 1987-129186/18.

New salmon and eel calcitonin analogues \cdot do not have disulphide bond connecting cysteine residues.

Claim 1; page 9-10; 10pp; English.

The salmon calcitonin analogue has the biological activity of the same type of calcitonin and comparable potency to known calcitonins. It differs in not having a disulphide bond connecting the cysteines at postitions 1 and 7. In a test, 3 and 9 MU/100 g body weight of the standard salmon calcitonin and 0.2 ml/100 g body weight of the standard salmon calcitonin and 0.2 ml/100 g body weight of the analogue were given to different rates. Serum calcitum was determined after 1 hr. The standard salmon calcitonin was found to contain 4000 IU/mg, whereas the analogue assayed at 4250 IU/mg.

Sequence 32 AA;

Gaps 0; Query Match 94.0%; Score 172; DB 8; Length 32; BBst. Local Similarity 100.0%; Pred. No. 1.4e-15; Matches A2; Conservative 0; Mismatches 0; Indels Matches 95.

0;

ò qq

Search completed: May 30, 2003, 09:50:26 Job time: 37 secs

seql.rag

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

May 30, 2003, 09:49:44 ; Search time 15 Seconds (without alignments) 217.905 Million cell updates/sec Run on:

Title: Perfect so Sequence:

183 1 mcsnlstcvlgklsqelhklqtyprtntgsgtpg 34 score:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Total number of hits satisfying chosen parameters: 283224 seqs, 96134422 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_73:* Database :

1: pirl: * 2: pirl: * 3: pir2: * 4: pir4: *

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | Description | calcitonin 1 - pin | - I | calcitonin 1 precu | calcitonin - Japan | calcitonin 2 - soc | 2 | calcitonin 2 - pin | bre | calcitonin 3 - coh | calcitonin precurs | | calcitonin precurs | phosphoribulokinas | phosphoribulokinas | calcitonin - bovin | calcitonin - pig | phosphoribulokinas | phosphoribulokinas | phosphoribulokinas | hypothetical prote | phosphoribulokinas | phosphoribulokinas | topolsomerase B [i | 3-26b | ďį |
|-----------|-----------------------|--------------------|--------|--------------------|--------------------|--------------------|--------|--------------------|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------|
| SUMMAKIES | ID | 10 | 151260 | TCON | TCEE | TCONZ | TCONSC | TCONZP | TCCH | TCONS | TCRT | TCHU | A41716 | JC4977 | A35934 | A60063 | TCSH | 80208 | T12436 | TCBO | TCPG | S16583 | S16585 | S15743 | 562453 | AD2321 | T06463 | AG1026 | B25750 | A69713 |
| | DB | 7 | 7 | - | Н | щ. | Н | ٦ | Н | -1 | Н | ~ | ~ | 7 | ~ | N | m | 7 | 7 | 7 | Н | 7 | ~ | N | 7 | 7 | N | 7 | ~ | 7 |
| | Query Match Length | | 59 | 136 | 32 | 32 | 32 | 32 | 138 | 32 | 136 | 141 | 141 | 136 | 137 | 67 | 143 | 402 | 397 | 32 | 32 | 395 | 404 | 404 | 438 | 334 | 352 | 664 | 213 | 401 |
| 90 | Query Match | 97.3 | 97.3 | 97.3 | 86.9 | 85.8 | 85.8 | 85.8 | 85.8 | 84.2 | 59.0 | 55.2 | 55.2 | 54.6 | 52.5 | 49.2 | 39.3 | 37.2 | 36.6 | 33.9 | 33.3 | 33.3 | 33.3 | 33.3 | 31.7 | 31.1 | 31.1 | 30.1 | 29.8 | 29.8 |
| | Score | | 178 | 178 | 159 | 157 | 157 | 157 | 157 | 154 | 108 | 101 | 101 | 100 | 96 | 90 | 72 | 68 | 29 | 62 | 61 | 61 | 61 | 61 | 58 | 57 | 57 | 55 | 54.5 | 54.5 |
| | Result No. | - | 8 | 3 | 4 | 5 | Ø | 7 | 80 | Ø | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 36 | 27 | 28 | 58 |

| 20000000000000000000000000000000000000 |
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|----------------------------------------|

ALIGNMENTS

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calcitonin 1 - pink salmon (fragment)
calcitonin 1 - pink salmon (fragment)
cispecies: Oncorphynchus gorbuscha (pink salmon)
c; species: Oncorphynchus gorbuscha (pink salmon)
c; pacesion: 13:6p-1996 #sequence_revision 13-6sp-1996 #text_change 16-Jul-1999
C; Accession: 151029; $42985
E; Martial, K; Maubras, L; Taboulet, J; Jullienne, A; Berry, M.; Milhaud, G.; Bens Proc. Natl. Acad. Sci. U.S.A. 91, 4912-4914, 1994
A; Title: The carcictonin gene is expressed in salmon gills.
A; Reference number: 151029; MUID: 9425438; PMID: 8197156
A; Recession: 151029
A; Rotters, preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-56 <MRN>
A; Residues: 1-56 <MRN>
A; C; Carcictics: EMBL: X78080; NID: 9459540; PIDN: CAA54988.1; PID: 9459541
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          %, Gene: calc I c) subperfamily procalcitonin (fragment) #status predicted <MAT1> F:1-56/Product: procalcitonin 1 #status predicted <MAT2> F:3-34/Product: calcitonin 1 #status predicted <MAT2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 97.3%; score 178; DB 2; Length 56; Best Local Similarity 100.0%; Pred. No. 8.4e-18; Indels Matches 3; Conservative 0; Mismatches 0; Indels
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1) CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 35 2 CSNLSTCVLGKLSQELHKLOTYPRTNTGSGTPG 34 qq δ

RESULT 2
151260
calcitonin I - pink salmon (fragment)
calcitonin I - pink salmon (fragment)
C;pecides: Oncorhynchus gorbuscha (pink salmon)
C;pate: 13-2ep1996 **Reguence_revision 13-Sep-1996 **text_change 21-Jul-2000
C;Accession: 151260: 151261
R;Martial, K: Maubras, L: Taboulet, J:; Jullienne, A: Milhaud, G:; Moukhtar, M.S.;
Genel 149, 277-221, 1994
A;Itie: Production of salmon calcitonin I in Oncorhynchus gorbuscha by alternative p
A;Accession: 151260
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Accession: 151261
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Accession: 151261
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Cession: 151261
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Cession: 151262
A;Cession: 151262
A;Cession: 15264
A;Cession: CT
A;Cession: CT
A;Cenelics: CT
A;Cenelics: CT
A;Cenelics: CT

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCON2

Calcitonin 2 - sockeye salmon

Cispecies: Oncorbynchus nerka (sockeye salmon)

Cispecies: Oncorbynchus nerka (sockeye salmon)

Cispecies: 22-May-1981 #sequence_revision 22-May-1981 #text_change 23-Aug-1996

Ciscession: A01531

Riketumann, H.T.: Lequin, R.M.; Habener, J.F.; Singer, F.R.; Niall, H.D.; Potts Jr., in Endocrinology 1971: Proceedings of the Third International Symposium, Taylor, S., A:Title: Chemistry and physiology of the calcitonins: some recent advances.

A:Reference number: A04616

A:Accession: A01531
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C:Keywords: amidated carboxyl end; hormone
F:1-7/Disulfide bonds: #status experimental
F:2-7/Modifided site: amidated carboxyl end (Pro) #status experimental
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Larity 87.5%; Pred. No. 4.1e-15;
Conservative 3; Mismatches 1; Indels
                                     Query Match

Query Match

B6.9%; Score 159; DB 1; Le

Best Local Similarity 90.6%; Pred. No. 2.2e-15;

Matches 29; Conservative 2; Mismatches 1;

Matches 29; Conservative 2; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 157; DB 1; LA
Pred. No. 4.1e-15;
3; Mismatches 1;
                                                                                                                                                                                                                                                       2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                           1 CSNLSTCVLGKLSQELHKLQTYPRTDVGAGTP 32
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Local Similarity 87.5%;
es 28; Conservative
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Matches 28; Conserv
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Matches 28;
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Cibecies: Oncorthynchus sp. (salmon)
C;Becies: Oncorthynchus sp. (salmon)
C;Becies: 0ncorthynchus sp. (salmon)
C;Becies: 24.Apr-1984 #sequence_revision 12-Apr-1996 #text_change 18-Jun-1999
C;Accession: Al1229; Ap172; Ap1530
R;Poeschl, E.; Lindley, I.; Hofer, E.; Seifert, J.M.; Brunowsky, W.; Besemer, J. FBBS Lett, 256, 96-100, 1987
R;Poeschl, E.; Lindley, I.; Hofer, E.; Seifert, J.M.; Brunowsky, W.; Besemer, J. FBBS Lett, 256, 96-100, 1987
A;Title: The structure of procalcitonin of the salmon as deduced from its cDNA sequence. A;Reference number: Al1229; WUID:88083644; PWID:3691820
A;Rolecule type: mRNA
A;Residues: 1-136 < POES
A;Cression: Al1229 < A;Returnan, H.T.; CPPP, D.H.; Potts Jr., J.T.
R;Niall, H.D.; Keutmann, H.T.; CPPP, D.H.; Potts Jr., J.T.
R;Niall, H.D.; Keutmann, H.T.; CPPP, D.H.; Potts Jr., J.T.
R;Niall, H.D.; Keutmann, H.T.; CPPP, D.H.; Potts Jr., J.T.
R;C. Nall, Accession: A93772; MUID:70033602; PMID:5261048
A;Rocession: A93772
A;Rocession: A93772
A;Rocession: A93772
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A.McCesule type: protein
A.McCesule type: protein
A.Residues: 83-114 sKIA>
R. Residues: 83-114 sKIA>
R. Guttmann. S.: Pless, J.; Huguenin, R.L.; Sandrin, E.; Bossert, H.; Zehnder, K.
Helv. Chim. Acta 52, 1789-1795, 1969
A.Title: Synthese von Salm-calcitonin, einem hochaktiven hypocalcaemischen Hormon.
A.Reference number: A91631; MUID:70067983; PMID:536191
A.Reference number: A91631; MUID:70067983; PMID:536191
A.Reference sumber: A91631; MUID:70067983; PMID:536191
A.Reference and A.Reference of the natural hormone was supported by that of the synth C.Superfamily: calcitonin as structure of the natural hormone was supported by that of the synth C.Superfamily: calcitonin as status predicted <PGP>
F.2-136/Pordouct: procalcitonin 1 status predicted <PGP>
F.83-114/Product: calcitonin 1 status experimental <AI>
F.83-89/Disulfide bonds: *status experimental <AI>
F.83-89/Disulfide bonds: *status experimental <AI>
F.81-89/Disulfide site: amidated carboxyl end (Pro) (amide in mature form from following 91)
                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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Residues: 1-32 cMOD>
Sesidues: 1-32 cMOD>
Seyperfamily: calcitonin
Keywords: amidated carboxyl end
1-7/Disulfide bonds: #status experimental
32/Modified site: amidated carboxyl end (Pro) #status experimental
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                                                                                                         Length 59;
                                                                                                                                                                                                     Indels
                                                                                                  Query Match 97.3%; Score 178; DB 2; Best Local Similarity 100.0%; Pred. No. 8.8e-18; Marches 33; Conservative 0; Mismatches
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C, Superfamily: calcitonin
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Wicontains: Amountains procalcitonin cleavage peptide (N-proCT); carboxyl-termina C; Species: Rattus norvegicus (Norway rat) R; Species: Rattus (Norway rat) R; Norway rat) R; Norway rat) R; Norway rat, R; Norway
                                                                                                                                                                                                                                                                 A;Cross-references: GB:M27563; NID:g211373; PIDN:AAA48648.1; PID:g211374 C;Comment: The calcitonin gene codes for two mRNA species by tissue-specific alternat ripheral nervous system codes for calcitonin gene-related peptide. C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Contents: annotation; synthesis A; Note: the synthetic hormones were the same as the natural ones on the basis of phys an calcitonins 1 or 2
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A.R.Cession: B01531
A.R.Cession: B01531
A.R.R.Cession: B01531
A.R.Cession: B015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Introns: 29/2; 73/2
C; Superfamily: calcitonin
C; Superfamily: calcitonin
K; Reywords: alternative splicing; amidated carboxyl end; hormone
F; 82-113/Product: calcitonin #status experimental <MAT>
F; 82-88/Disulfide bonds: #status experimental
F; 113/Modified site: amidated carboxyl end (Pro) (amide in mature form from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               calcitonin 3 - coho salmon
C.Species: Oncorhypochus Kisutch (coho salmon)
C:Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 08-Dec-1995
C;Accession: B01531; A01531
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C.Keywords: amidated carboxyl end
F.17/Disulfide bonds: #status experimental
F.32/Modified site: amidated carboxyl end (Pro) #status experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atural salmon calcitonins.
MUID: 73047885; PMID: 4508400
A:Reference number: 150182; MUID:85102042; PMID:3838160
A:Accession: 150182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 157; DB 1;
Pred. No. 1.7e-14;
4; Mismatches 1;
                                                                                                                       A:Status: preliminary: translated from GB/EMBL/DDBJ
A:Molecule type: mRNA
A:Mesidues: 71-117 <LA2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
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Similarity 84.4%;
27; Conservative 4
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Matches 28; Conservative
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Cispecies: Oncorhypthus agorbuscha (cispecies)
Cispecies: Oncorhypthus (cispecies)
Cispecies: Oncorhopthus (cispecies)
Cis
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A; Residues: 1-32 < 460M>
R; Lasmoles, F.; Jullienne, A.; Desplan, C.; Milhaud, G.; Moukhtar, M.S.
FEBS Lett. 180, 113-116, 1985
A; Title: Structure of chicken calcitonin predicted by partial nucleotide sequence of its
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A; Residues: 1.138 c4M1v
A; Residues: 1.138 c4M1v
A; Cross.references: EMBL:X06311
A; Note: the sequences: EMBL:X06311
A; Note: the sequences of codons 31-33 and 34-38 are interchanged in this reference; the A; Note: the sequences of codons 31-33 and 34-38 are interchanged in this reference; the A; Note: the authors translated the codon GAC for residue 56 as Glu; the codon GAC was cc EMBO J. 4, 2603-2607, 1985
A; Minvielle, S; Milhaud, G; Moukhtar, M.S.
A; Title: Elucidation of the nucleotide sequence of chicken calcitonin mRNA: direct evide A; Accession: A25725; MUID:86030240; PMID:4054101
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C;Species: Gallus gallus (chicken)
C;Date: 30-Jun-1991 #sequence_revision 30-Jun-1991 #text_change 18-Jun-1999
C;Accession: S00153; A25725; A24415; IS0182; A22467
R;Minvielle, S.; Cressent, M.; Delehaye, M.C.; Segond, N.; Milhaud, G.; Jullienne, A.;
FEBS Lett. 223, 63-68, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence of chicken calcitonin
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A; Residues: 12-55, E',57-138 <LAS>
A; Cross-references: EMBL: X03012; NID: 963157; PIDN: CAA26796.1; PID: 963158
A; Unionma, T.; Watanabe, M.; Hirose, S.; Kanai, A.; Kangawa, K.; Matsuo, H.
J. Blochem. 100, 459-467, 1986
A; Title: Isolation and determination of the amino acid sequence of chicker
A; Reference number: A24415; MUID: 87057104; PMID: 3782060
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 32;
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Pred. No. 4.1e-15;
3; Mismatches 1;
      1 CSNLSTCVLGKLSQDLHKLQTFPRTNTGAGVP 32
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ilarity 87.5%;
Conservative
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6999-7011, 1989
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A.Cross-references: GB.N31027; GB.300707; GB.300709; GB.300709; GB.N00002; NID:g343161; A.Mara, S.C., David. D.N.; Rosenicla, M.G.; Rose, B.A.; Evans, R.M.
A.References and M. N383; M.D.31041701; M.D.51041701; M.
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C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 11-Aug-1995 #text_change 08-Dec-2000
C;Accession: S07643; C22949; S07238; S07242; A91034; S36900; A91629; A60784; I39387; I65
R;Broad, P.M.; Symes, A.J.; Thakker, R.V.; Craig, R.K.
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F:87/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:116/Modified site: amidated carboxyl end (Pro) (amide in mature
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ilarity 54.5%;
Conservative
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Best Local Similarity
Matches 18; Conserv
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ATTITES: Structure and technical and a part of the parent calcitonin/alpha-CGRP gene. Attites: Structure and technical and a parent a parent and a parent a parent a parent and a parent a par
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Calcitonin precursor - rabbit (fragment)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Accession: A35934
C; Accession: A35934
C; Accession: A35934
C; Accession: Biophys. Res. Commun. 171, 1111-1114, 1900
A; Title: Predicted structure of rabbit N-terminal, calcitonin and katacalcin peptides A; Reference number: A35934; WuID:91024969; PMID:1699521
A; Status: preliminary; not compared with conceptual translation
A; Molecule type: mRNA
A; Residues: 1-137 cMAR>
C; Superfamily: calcitonin
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R;Mol, J.A.; Kwant, M.M.; Arnold, I.C.J.; Hazewinkel, H.A.W.
Regul, Peptr. 35, 189-195, 1991
A;Title: Elucidation of the sequence of canine (pro)-calcitonin. A molecular biologic A;Reference number: A60063; MUID:92100867; PMID:1758974
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A.Residues: 1-67 <MOL>
A.Cross-references: 08:X56994
C.Superfamily: calcitcoin
C.Superfamily: calcitcoin #status predicted <MAT>
F:22-53/Product: calcitonin #status predicted <MAT>
F:53/Modified site: amidated carboxyl end (Pro) (amide in mature form from following
C; Species: Mus musculus (house mouse)
C;Date: 31-Dec-1996 #sequence_revision 31-Dec-1996 #text_change 20-Jun-2000
C;Accession: JC4977.
R;Rehil, M.; Luger, K.; Beier, W.; Falk, W.
Biochem. Biophys. Res. Commun. 226, 420-425, 1996
A;Title: Molecular cloning and expression of mouse procalcitonin.
A;Reference number: JC4977; MUID:96400274; PMID:8806650
A;Accession: JC4977
A;Molecule type: MRN
A;Residues: 1-136 <REH
A;Cross-references: BMBL:897991; NID:91644303; PIDN:CAA666630.1; PID:91644304
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C;Species: Canis lupus familiaris (dog)
C;Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 08-Dec-1995
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C. Comment: This protein is a hypocalcemic hypophosphatemic hormone
C. Superfamily: calcitonin #status predicted <MAT>
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Pred. No. 1.5e-06;
7; Mismatches 9;
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Best Local Similarity 51.5%; Pred. No. 1.9e-05;
Matches 17; Conservative 5; Mismatches 11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.6%;
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Best Local Similarity 51.59
Matches 17; Conservative
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R;Minvielle, S.; Giscard-Dartevelle, S.; Cohen, R.; Taboulet, J.; Labye, F.; Jullienne, J. Biol. Chem. 266, 24627-24631, 1991
A;Title: A novel calcitonin carboxyl-terminal peptide produced in medullary thyroid carc A;Reference number: A41716; MUID:92105127; PMID:1761559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Modecule type: mRNA
A; Residues: 1-141 <MIN>
A; Cross-references: GB: M64486; NID: 9179819; PIDN: AAA58403.1; PID: 9179820
A; Experimental source: meduliary thyroid carcinoma
A; Note: production of calcitonin carboxyl-terminal peptide II was demonstrated in medull
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91
R;Nelkin, B.D.; Rosenfeld, K.I.; de Bustros, A.; Leong, S.S.; Roos, B.A.; Baylin, S.B. Blochem. Blophys. Res. Commun. 123, 648-655, 1984
Alfille: Structure and expression of a gene encoding human calcitonin and calcitonin gen
A;Reference number: 152204; MUID:85022523; PMID:6146938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C.Keywords: alternative splicing; hormone; thyroid gland
F.85-116/Product: calcitonin #status experimental <CTN>
F:121-141/Product: calcitonin carboxyl-terminal peptide II #status experimental <CCII>
                                                                                                                                                                                                                                                                                                 A.Gene: GDB.CALCA; CALCI
A.Gene: GDB.CALCA; CALCI
A.Gene: GDB.CALCA; CALCI
A.Map position: 11p15.2-11p15.1
A.Introns: 29/2; 76/2
C.Superfamily: calcitonin
C.Keywords: alternative splicing; amidated carboxyl end; hormone; thyroid gland
C.Keywords: alternative splicing; predicted <PRO>
F.12-5/Domain: signal sequence #status predicted <PRO>
F.26-16/Product: calcitonin #status experimental <CTN>
F.121-141/Product: calcitonin #status experimental <CTN>
F.185-116/Product: katacalcin #status experimental <CTN>
F.185-11fide bonds: (in monomeric form) #status experimental
F.85-70/Isulfide bonds: interchain (to 91 in dimeric form) #status experimental
F.91/Disulfide bonds: interchain (to 85 in dimeric form) #status experimental
F.91/Disulfide status experimental
F.91/Disulfide bonds: interchain (to 91 in dimeric form) #status experimental
F.91/Disulfide status experimental
F.91/Disulfide bonds: interchain (to 85 in dimeric form) #status experimental
F.91/Disulfide status experimental
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                                                                                                                                                                                A; Modecule type: mRNA
A; Residues: 48-83 <RE2>
A; Cross-references: GB:K03513; NID:g181173; PIDN:AAA52124.1; PID:g553244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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Pred. No. 1.2e-06;
6; Mismatches 10;
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Pred. No. 1.2e-06;
6; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGNESTÇMEGTYTQDFNKFHTFPQTAIGVGAPG 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
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A;Map position: 11p15.2-11p15.1
C;Superfamily: calcitonin
                                                                                                                                                  A; Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 55.2%; Scc
Best Local Similarity 51.5%; Pro
Matches 17; Conservative 6;
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51.5%;
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nes 17; Conservative
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Search completed: May 30, 2003, 09:51:17 Job time : 16 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

May 30, 2003, 09:49:44; Search time 79 Seconds (without alignments) 88.679 Million cell updates/sec Run on:

Title:

183 1 mcsnlstcvlgklsgelhklqtyprtntgsgtpg 34 Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

671580 Total number of hits satisfying chosen parameters:

671580 seqs, 206047115 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SPTREMBL_21:*

sp_human:*
sp_invertebrate:*
sp_mammal:* sp_organelle:* sp_phage:* 1: sp_archea:* 2: sp_bacteria:* 3: sp_fungi:* sp_plant:*
sp_rodent:*
sp_virus:* sp_mhc:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*

sp_bacteriap:*

sp_archeap:*

SUMMARIES

| Description | 091157 oncorhynchu | | Q92163 oncorhynchu | O | - | Q8qq73 oncorhynchu | Q8qq72 salmo salar | Q8qq71 oncorhynchu | 08qq70 salvelinus | Q8qq83 oncorhynchu | Q8qft8 fuqu rubrip | 09ps21 carassius a | P79813 oncorhynchu | O9w6z3 qallus qall | Q90yc4 paralichthy | Q9n0v5 equus cabal |
|-------------------------------|--------------------|----------|--------------------|----------|----------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| ΩI | 3 091157 | 3 Q91970 | 3 092163 | 3 Q8QG84 | 3 Q8QG82 | 3 080673 | 3 080672 | 3 080671 | 3 Q8QG70 | 3 080683 | 3 Q8QFT8 | 3 Q9PS21 | 3 P79813 | 3 Q9W6Z3 | 3 Q90YC4 | Q9N0V5 |
| % Query Match Length DB | 56 1 | 59 1: | 62 1: | 32 1 | 32 1 | 32 1 | 32 1 | 32 1 | 32 1 | 32 1 | 136 1 | 32 1 | 62 1 | 65 1: | 50 1 | 140 6 |
| % Query Match | 97.3 | 97.3 | 97.3 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 | 92.3 | 90.7 | 86.9 | 86.3 | 85.8 | 85.2 | 61.2 |
| Score | 178 | 178 | 178 | 172 | 172 | 172 | 172 | 172 | . 172 | 169 | 166 | 159 | 158 | 157 | 156 | 112 |
| Result No. | | 7 | ව |)~ | S | 9 | 7 | 80 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| Q13935 homo sapien O88610 mus musculu Q9myv2 canis famil Q95033 odontella s O8vorq anabaena so | P93681 pisum sativ O9atc3 vaucheria 1 O9atc5 vaucheria 1 | | Oyonio pascellella Q9d9d4 mus musculu P96583 bacillus su Q98871 brachydanio Q35255 mus musculu | | Q9nif9 metacnephia Q9nta2 homo sapien Q3356 caenorhabdi Q937b7 pseudomonas Q8rsh4 uncultured Q8s8p8 arabidopsis |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Q13935 O88610 Q9MYV2 Q95033 O8YPR9 | P93681 Q9ATC3 Q9RHF5 | 094826 094091 09BGW1 08Q805 | 090NF6 090904 09883 098871 035255 | Q99L90 Q96EV5 Q9PBT0 Q8RNQ8 Q8SZZ7 Q9V358 | Q9NIF9 Q9NTA2 Q23526 Q937B7 Q8RSH4 Q8S8P8 |
| 111 | 10 10 | 15 | | 11 16 2 5 5 | 2 2 2 2 1 0 1 0 1 0 |
| 93 48 130 396 334 | 352 405 664 | 473 103 233 | 310 727 321 462 | 462 164 685 1066 1332 1472 | 152 435 439 687 687 83 |
| 55.2 52.5 49.2 31.7 | 30.6 | 2222 2222 2222 2222 2322 2322 2322 232 | 28.7 28.7 28.4 28.4 | 28.4 27.9 27.9 27.9 27.9 27.9 | 27.6 27.6 27.6 27.6 27.6 27.3 |
| 101 96 90 58 | ក្រសួស ភេសស - | 53.5 53.5 | 52.5 52.5 52.5 52.5 | 52 52 52 53 53 54 54 54 54 54 54 54 54 54 54 54 54 54 | 50.5 50.5 50.5 50.5 50.5 |
| 17 18 19 20 21 | 2222 | 25 27 28 28 | 33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ | 444 444 5443 |

ALIGNMENTS

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Gaps
                                                                                                                                                                                                                                                                                                                 Oncorhynchus gorbuscha (Pink salmon) (Humpback salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8017;
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O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SEQUENCE FROM N.A. TISSUS-GILL | MEDLINE-9425438; PubMed=8197156; MEDLINE-94255438; PubMed=8197156; MEDLINE-94255438; PubMed=8197156; MEDLINE-94255438; PubMed=8197156; Martial K., Maubras L., Taboulet J., Jullienne A., Berry Milhaud G., Benson A.A., Moukhtar M.S. Cressent M.; The calcitonin gene is expressed in salmon gills."; Proc. Natl. Acad. Sci. U.S.A. 91:4912-4914(1994).

EMBL: X78080; CAA54988.1; EMBL: X78080; CAA54988.1; EMBL: X78080; CAA54988.1; PROC. CREPLIAPP; I. PEROLISS, PROC. CREPLIAPP; I. PRINTES, PROC. CALCITONINA. SMART; SMORT; SAO0133; CALCITONINA. SMART; PROC. SEC. CALCITONINA; I. PROC. TERM. PROC. SEC. CALCITONINA; I. PROC. TERM. PROC. TERM. PROC. TERM. PROC. TERM. T
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56 AA; 6165 MW; B073FB5C56C1848F CRC64;
                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2002 (TrEMBLrel. 20, Last annotation update)
Calcitonin (Fragment).
                                                                        56 AA.
                                                                        PRT;
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Best Local Similarity 100.0
Matches 33; Conservative
                                                                        PRELIMINARY;
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CHAIN
SEQUENCE
                                                                        091157
RESULT 1
091157
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2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34

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Gaps

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Indels

Length 62;

091970; 091970

RESULT 2 091970

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SEQUENCE FROM N.A. The G.G., Yang G.P., Zhang X.C.; Zhang B.H., Mac Y.X., Wang G.G., Yang G.P., Zhang and Sequence Analysis of Salmon Calcitonin Genes from Three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A..

Shang B.H., Mao Y.X., Wang G.G., Yang G.P., Zhang X.C.;

"Cloning and Sequence Analysis of Salmon Calcitonin Genes from Three Different Sources.";

Submitted (MAR-2002) to the EMBL/Genhank/nnnr Astalon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBI_TaxID=190488;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oncorhynchus gorbuscha (Pink salmon) (Humpback salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Protinopteryyii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NGBI_TaxID=8017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Different Sources.";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases
EMBL; AR191874; AAL99995.1; -.
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF491872; AAL99993.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32 AA; 3435 MW; AFC935519807E7C2 CRC64;
                                                                            62 AA; 6865 MW; EE8AA50D5ED4CA99 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.0%; Score 172; DB 13;
100.0%; Pred. No. 1.3e-19;
Live 0; Mismatches 0;
                                                                                                             97.3%; Score 178; DB 13;
100.0%; Pred. No. 3.3e-20;
tive 0; Mismatches 0;
                                                                                                                                                                                            2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34
                                                                                                                                                                                                                   9 CSNLSTCVLGKLSQELHKLOTYPRTNTGSGTPG 41
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PRINTS; PR00270; CALCITONINA.
SMART; SM00113; CALCITONIN; 1.
PROSITE; PS00258; CALCITONIN; 1.
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01-JUN-2002 (TrEMBLrel. 21,
01-JUN-2002 (TrEMBLrel. 21,
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                                                                                                                     Query Match 97.3
Best Local Similarity 100.
Matches 33; Conservative
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Matches 32; Conserv
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                                                                                                                                                                                                                                                                                                   RESULT 4
Q8QG84
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                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Calcitonin I (Fragment).
CT.
Oncorhynchus gorbuscha (Pink salmon) (Humpback salmon).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=95047488; PubMed=7959002;
MEDLINE=95047488; PubMed=7959002;
Martial K., Maubras L., Taboulet J., Jullienne A., Milhaud G.,
Moukhtar M.; Cressent M.;
"Production of salmon calcitonin I in Oncorhynchus gorbuscha by
alternative polyadenylation of two RNA species.";
Gene 149:277-281(1994).
EMBL: $74353; AAD14152.1; -.
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Jansz H.S., Zandberg J.;
"Identification and partial characterization of the salmon calcitonin/CGRP gene by polymerase chain reaction.";
Ann. N. Y. Acad. Sci. 657:63-69(1992).
EMBL; 840496; AAB22592.1;
HSSP; P01262; IBKU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 59;
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Last annotation update)
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Mismatches 0;
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          62 AA
                                                                                                                                AA.
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InterPro; IPR001935; Calcitonin_A.
Pfam; PF00214; Calc_CGRP_IAPP; 1.
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InterPro: IPR01693; Calcitonin-like.
InterPro: IPR001935; Calcitonin_A.
Pfam: PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
SMART; SW00113; CALCITONIN; 1.
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Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
Actinopterygli; Neopterygli: Teleostei; Euteleostei;
Protacanthopterygli: Salmoniformes; Salmonidae; Salvelinus.
NCBL_TaxID=8036;
                                                                                                                                                                                                Oncorhynchus kisutch (Coho salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8019;
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Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL: AF497758; AAM18089.1; -.
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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
calcindin (Fragment).
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Last annotation update)
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100.0%; Pred. No. 1.3e-19;
tive 0; Mismatches 0;
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Local Similarity 100.0%; Pred. No. 1.3e-19;
hes 32; Conservative 0; Mismatches 0;
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2 CSNLSTCVLGKLSQELHKLQTYPRINTGSGTP 33
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Best Local Similarity 100.0
Matches 32; Conservative
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygli; Neopterygli; Teleostei; Euteleostei; Protacanthopterygli; Salmoniformes; Salmonidae; Salmo.

MCBI_TaxID=8030;
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                                                                                                                                                                                                                                                                                                                                                            Zhang B., Mao Y., Wang G., Zhang X.;
"Cloning and Sequence Analysis of Salmon Calcitonin Genes of
Aquaculture.";
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                  Length 32;
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01-JUN-2002 (TIEMBLIEL. 21, Last sequence update)
01-JUN-2002 (TIEMBLIEL. 21, Last annotation update)
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Last annotation update)
                 Ouery Match 94.0%; Score 172; DB 13; Best Local Similarity 100.0%; Pred. no. 1.3e-19; Matchles 32; Conservative 0; Mismatchles 0;
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01-MAR-2002 (TrEMBLrel. 20, Last annotation update)

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2hang B.H., Mao Y.X., Wang G.G., Yang G.P., Zhang X.C.;

2hang and Sequence Analysis of Salmon Calcitonin Genes from Three Different Sources.";

Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.

EMBL: AF491873; AAL99994.1;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopteryyii; Neopteryyii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopteryyii; Percomorpha; Tetraodontiformes;
Tetraodontidee; Takifugu.
                                                                                                                                                                                                                                                       Oncorhynchus keta (Chum salmon).
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
Actinopterygli: Neopterygli: Teleostei: Euteleostei:
Protacanthopterygli: Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8018;
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Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ309015; CAC81278.1; - CALCITONIN.
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32 AA; 3462 MW; AFC935406807E7C2 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
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Pred. No. 6.1e-18;
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01-JUN-2002 (TrEMBLrel. 21, Cr
01-JUN-2002 (TrEMBLrel. 21, Le
01-JUN-2002 (TrEMBLrel. 21, Le
Calcitonin.
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                                                                                                                                       01-JUN-2002
01-JUN-2002
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                                                                                                                01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
RESULT 10
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                                                                                                                                                                   MEDLINE=93202415; PubMed=8454163; Sasayama Y., Watanabe T.X., Sasayama Y., Ukawa K., Kai-Ya H., Oguro C., Takei Y., Watanabe T.X., Nakajima K., Sakakibara S.; "Goldfish calcitonin: purification, characterization, and hypocalcemic potency.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Carassius.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-9705724; Pubmed-8901583; Mansz H., Martial K., Zandberg J., Milhaud G., Benson A.A., Julienne A., Moukhtar M.S., Cressent M.; "Identification of a new calcitonin gene in the salmon Oncorhynchus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calcitonin 4 (Fragment).

Oncorhynchus gorbuscha (Pink salmon) (Humpback salmon).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacantbopterygii; Salmoniformes; Salmonidae; Oncorhynchus.

NCBI_TaxID=8017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALCITONIN 4.
CARBOXY TERMINAL PEPTIDE.
1316EEB8EBACF199 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                            PS00258; CALCITONIN; 1.
32 AA; 3390 MW; AFC93549F818560F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 93:12344-12348(1996).
EMBL, U71286; AAB38532.1; -.
HSSP; P01262; 1BKU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 158; DB 13;
Pred. No. 4.4e-17;
4; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-TERMINAL PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 1.4e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Mismatches
                                                                                                                                                                                                                                                                            Endocrinol. 89:189-194(1993).
                                                                                                                                                                                                                                                                                              HSSP; P01262; 1BKU;
InterPro; PR001693; Calcitonin-like.
InterPro; IPR0016935; Calcitonin.A.
Pfam; PF00214; Calc_CGRP_IAPP; 1.
PRINTS; PR00270; CALCITONINA.
SMARY; SM00113; CALCITONIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Interpro; IPR001693; Calcitonin-like.
Interpro; IPR001935; Calcitonin_A.
Pfam: PF00214; Calc_GGRP_IAPP; I.
PRINTS; PR00270; CALCITONINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last seq
01-MAR-2002 (TrEMBLrel. 20, Last ann
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00113; CALCITONIN; 1. PROSITE; PS00258; CALCITONIN; 1.
                Carassius auratus (Goldfish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86.9%;
90.6%;
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6860 MW;
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84.8%;
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nes 28; Conservative
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es 29, Conserv
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62 AA;
                                                                                 Cyprinidae; Cara
NCBI_TaxID=7957,
Calcitonin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gorbuscha.
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Best Local Si
Matches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P79813
P79813;
                                                                                                                                                                                                                                                                                Gen. C
HSSP;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P79813
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2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34

Q9W6Z3;

SO DE REPRENTADO DE CONTROL DE CO

RESULT 14 29W62

ga

Q90YC4 Q90YC4;

RESULT 15

ò QQ 85.2%; Score 156; DB 13; Length 50;

1 32 CALCITONIN. 50 AA; 5426 MW; ABDBB59A27DA249F CRC64;

SEQUENCE Query Match

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Gaps
              ;;
0
Best Local Similarity 81.8%; Pred. No. 7.1e-17;
Matches 27; Conservative 4; Mismatches 2; Indels
                                                       2 CSNLSTCVLGKLSQELHKLQTYPRINTGSGTPG 34
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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May 30, 2003, 09:49:44; Search time 14 Seconds (Without alignments) 71.456 Million cell updates/sec
OM protein - protein search, using sw model
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183 1 mcsnlstcvlgklsqelhklqtyprtntgsgtpg 34 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

262574 seqs, 29422922 residues

Searched:

262574 Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Minimum DB seq length: 0 Maximum DB seq length: 200000000

Issued_Patents_AA:*

1. /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

22. /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

3. /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Description | Sequence 7, Appli | é | 9 | 7, | 4, | Sequence 2, Appli | 4 | ý | Sequence 18, Appl | Sequence 31, Appl | 43, | 38, | 2, 7 | Sequence 2, Appli | 38, | 38, | Sequence 2, Appli | Sequence 2, Appli | 4 | Patent No. 5183802 | Sequence 8, Appli | Ĥ | 20, | 20, | 5, 2 | ω, | Sequence 1, Appli |
|----------------------------|-------------------|------------------|------------------|------------------|------------------|-------------------|-----------------|------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|------------------|-------------------|-------------------|------------------|--------------------|-------------------|-----------------|-------------------|------------------|------------------|-----------------|-------------------|
| ID | US-07-776-272-7 | US-07-952-735A-6 | US-08-164-408A-6 | US-08-164-408A-7 | US-07-794-288D-4 | -176 | US-08-424-866-4 | -477 | -477 | US-08-477-727A-31 | US-08-477-727A-43 | US-08-595-868C-38 | US-08-847-007A-2 | US-09-071-090-2 | US-09-139-819A-38 | US-09-750-913-38 | PCT-US93-12692-2 | 43 | PCT-US96-05372-4 | 5183802-3 | US-07-776-272-8 | US-08-907-602-1 | US-08-467-472C-20 | US-09-384-061-20 | US-07-952-735A-5 | US-08-490-669-3 | US-08-424-866-1 |
| DB | - | ,- | Н | Н | Н | ~-1 | ~1 | ~-1 | Н | П | Н | 7 | ٣ | m | 4 | 4 | 'n | 2 | Ŋ | 9 | Н | m | ٣ | 4 | щ | 7 | Н |
| % Query Match Length | 33 | 32 | 32 | 32 | 32 | 32 | 32 | 35 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 33 | 32 | 32 | 32 | 32 | 32 | 32 |
| % Query Match | 97.3 | 94.0 | 94.0 | 94.0 | | 94.0 | | | 94.0 | 94.0 | | | | 94.0 | | | | | 94.0 | | 90.2 | 89.1 | 88.5 | | è. | ġ | 86.9 |
| Score | 178 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 172 | 165 | 163 | 162 | 162 | 159 | 159 | 159 |
| Result No. | a | 2 | 8 | 4 | 2 | 9 | 7 | 80 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 36 | 27 |

| 28 .159 86.9 32 2 US-08-322-3866-2 29 159 86.9 32 2 US-08-555-866C-37 31 159 86.9 32 3 US-08-847-007A-3 32 159 86.9 32 4 US-09-171-090-3 33 159 86.9 32 4 US-09-170-91-3 34 159 86.9 32 4 US-09-170-91-3 35 159 86.9 32 5 US-09-750-913-7 36 158 86.3 32 4 US-09-750-913-3 37 159 86.9 32 5 US-08-467-472C-21 38 157 85.8 32 US-08-467-472C-21 39 157 85.8 32 US-09-139-819A-39 40 157 85.8 32 US-09-139-819A-39 41 157 85.8 33 1 US-07-776-272-9 43 155 84.7 31 3 US-09-107-090-7 44 154 84.2 32 US-08-555-86C-40 45 154 84.2 32 US-08-555-86C-40 | Sequence 2, Appli Sequence 37, Appli Sequence 3, Appli Sequence 37, Appli Sequence 37, Appli Sequence 1, Appli Sequence 1, Appli Sequence 21, Appli Sequence 39, Appli | 45 |
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ALIGNMENTS

RESULT 1

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Gaps
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                                                                            APPLICANT: Kaninuma, Toshihiko
APPLICANT: Iida, Toshii
APPLICANT: Tajima, Masahiro
ATTLE OF INVENTION: Process for Purification of Polypeptide
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 97.3%; Score 178; DB 1; Length 33; Best Local Similarity 100.0%; Pred. No. 2.4e-17; Matches 33; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                  COMPUTER EADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC competible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/07/776,272
FILING DATE: 19911129
CLASSIFICATION: $30
ATORNEY/AGENT INFORMATION:
NAME: Player, William E
REGISTRATION NUMBER: 31,409
                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSE: Wegner. Cantor, Mueller & Player
STREET: 1233 20th St. N.W. P.O. Box 18218
CITY: Washington
STATE: District of Columbia
COUNTRY: United States of America
ZIP: 20036-8218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-450-23167
                 Sequence 7, Application US/07776272; Patent No. <u>5612454</u>; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELERAX: AAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 440706
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : 33 amino acids
AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: peptide HYPOTHETICAL: YES ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Salmon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
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US-07-776-272-7
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2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTPG 34

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NUMBER OF SEQUENCES:
                                                                                                                                               22202
                                                                                                      STATE: Vi
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US-08-164-408A-7
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                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: TAKAHASHI, Yoshio
APPLICANT: TAKAHASHI, AVIOShi
APPLICANT: TAKAHASHI, AVIOShi
APPLICANT: TAKAHASHI, AVIOShi
APPLICANT: TAKIGAWA, WASSHARU
APPLICANT: TAKIGAWA, WASSHARU
TITLE OF INVENTION: NOVEL CALCITONIN AND METHOD FOR THE
TITLE OF INVENTION: PREPARATION AND USE THEREOF
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                       AUDRESSEE: Burns, Doane, Swecker & Mathis STREET: George Mason Bldg., Washington & Prince Sts. CITY: Alexandria STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marcos C
Berta P.
Gemma J.
Procedure for Preparing Salmon
Calcitonin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/952,735A
FILING DATE: 30-NOV-1992
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94.0%; Score 172; DB 1; I 100.0%; Pred. No. 1.5e-16; tive 0; Mismatches 0;
1 CSNLSTCVLGKLSQELHKLQTYPRINTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROCE APPLICATION DATA:
APPLICATION NUMBER: JP 129695/1991
FILING DATE: 31-MAY-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 249322/1991
FILING DATE: 27-SEP-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 011900-196
TELECOMMUNICATION INFORMATION:
TELEFAX: (703)836-5620
TELEFAX: (703)836-5021
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/08164408A
Patent No. 5527881
GENERAL INFORMATION:
APPLICANT: Poblet, Marcos C
APPLICANT: Obiols, Berta P.
APPLICANT: Farres, Genma J.
TITLE OF INVENTION: Procedure for P
TITLE OF INVENTION: Calcitonin
                                                                                                                          Sequence 6, Application US/07952735A
Patent No. 5440012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Teskin, Robin L. REGISTRATION NUMBER: 35,030
                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32 amino acids
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Best Local Similarity 100.7
Matches 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: peptide US-07-952-735A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
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                                                                                                        US-07-952-735A-6
                                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
                                                                                        RESULT 2
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*** Ser at position 5 substituted with tert-butyl

Tyr at position 6 substituted with tert-butyl

Tyr at position 6 substituted with tert-butyl

The at position 6 substituted with tert-butyl

The at position 11 substituted with tert-butyl

Ser at position 13 substituted with tert-butyl

Glu at position 13 substituted with tert-butyl

His at position 15 substituted with tert-butyl

The at position 17 substituted with tert-butyl

The at position 21 substituted with tert-butyl

Tyr at position 21 substituted with tert-butyl

Tyr at position 22 substituted with

Tyr at position 22 substituted with

Tyr at position 25 substituted with tert-butyl

Tyr at position 35 substituted with tert-butyl

Tyr at position 37 substituted with tert-butyl

Tyr at position 31 substituted with tert-butyl

Tyr at position 31 substituted with tert-butyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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APPLICANT: Poblet, Marcos C
APPLICANT: Poblet, Berta P.
APPLICANT: Farres, Genma J.
TITLE OF INVENTION: Procedure for Preparing Salmon TITLE OF INVENTION: Calcitonin
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 94.0%; Score 172; DB 1; L
Best Local Similarity 100.0%; Pred. No. 1.5e-16;
Matches 32; Conservative 0; Mismatches 0;
CORRESPONDENCE ADDRESS:
ADDRESSEE: Wigman, Cohen, Leitner, & Myers, F
STREET: 1735 Jefferson Davis Hwy., Suite 200
CITY: Azlington
                                                                                                                                                                  ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, Kb storage
COMPUTER: IQ 486
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
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                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY AGENT INFORMATION:
NAME: Cohen, Herbert
REGISTRATION NUMBER: 25,109
REFERENCE/DOCKET NUMBER: 3721-A
TELECOMUNICATION INFORMATION:
TELEPHONE: (703)413-4300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 7, Application US/08164408A; Patent No. 5527881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (703)413-8129
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                               SOFTWARE: ASCII.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/O
FILING DATE: 09-DEC-1993
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 32 amino acids
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OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
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OTHER INFORMATION
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                                                                                                              Virginia
: USA
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SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/176,153
FILING DATE:
CLASSIFICATION: 530
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
US-08-176-153-2
Sequence 2, Application US/08176153
Patent No. 5710244
CENERAL INFORMATION:
APPLICANT: Labroo, Virender
APPLICANT: Sasaki, Tomikazu
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: ZYMOGENETICS, INC.
                                                                                                                                                COMFOURE CALIFORNIA
COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44

MEDIUM TYPE: Mb storage
COMPUTER: IEM PC COMPATIBLE
OPERATING SYSTEM: 150 M.S. DOS (Version OPERATING SYSTEM: 5.0) M.S. DOS (Version OPERATING SYSTEM: 5.0) M.S. DOS (VERSIT APPLICATION NUMBER: US/07/794,288D
FILING DATE: Herewith
CLASSIFICATION NUMBER: 07/794,288B
RICHASIFICATION NUMBER: 07/794,288B
RICHASIFICATION NUMBER: 07/794,288B
RILING DATE: 19-NOV-91
ATTORNEY/AGENT INFORMATION:
NAME: Duff, Bradford, J.
REGISTRATION NUMBER: 193/153
TELECOMMUNICATION INMBER: 193/153
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: FLORPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
   Center
633 West Fifth Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 32 AMINO ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: PEPTIDE
                                                           Suite 4700
                                                                                              CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: US-07-794-288D-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
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ZIP: 98105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The at position 7 substituted with tert-butyl Cys at position 7 substituted with trityl by at position 11 substituted with trityl ser at position 13 substituted with trityl Glu at position 13 substituted with tert-butyl Glu at position 15 substituted with tert-butyl Lys at position 17 substituted with trityl Tyr at position 2 substituted with trityl Tyr at position 2 substituted with tert-butyl Arg at position 2 substituted with tert-butyl Arg at position 2 substituted with tert-butyl Arg at position 24 substituted with tert-butyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ser at position 5 substituted
ADDRESSEE: Wigman, Cohen, Leitner, & Myers, P.C. STREET: 1735 Jefferson Davis Hwy., Suite 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 172; DB 1; 1
Pred. No. 1.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: HOWARD JONES,
APPLICANT: LAURA S.L. GAETA,
APPLICANT: KATHRYN S. PRICKETT and
TITLE OF INVENTION: NOVEL AMYLIN ANTAGONIST
TITLE OF INVENTION: PEPTIDES AND USES THEREFOR
CORRESPONDENCE: 227
CORRESPONDENCE ADDRESS:
                                                                                                                                                       ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, Kb storage COMPUTER: IQ 486
OPERATING SYSTEM: DOS
SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94.0%; Scor. 100.0%; Pred. No. 1. 0. Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
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                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/164,408A
FILING DATE: 09-DEC-1993
CLASSIFICATION: 09-DEC-1993
CLASSIFICATION: Herbert
REGISTRATION NUMBER: 25,109
REFERENCE/DOCKET NUMBER: 3721-A
TELECOMMUNICATION INFORMATION:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4, Application US/07794288D Patent No. 5580953
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: LYON & LYON
First Interstate World
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acids
TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.(
Matches 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION:
OTHER INFORMATION:
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OTHER INFORMATION
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OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION
                                                               Arlington
                                                                                                     Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
US-07-794-288D-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-164-408A-7
                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
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Length 32;

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Gaps

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Indels

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100.0%; Pred. No. 1.5e-16; atlive 0; Mismatches 0;
                                                      2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                            1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
Best Local Similarity 100.0
Matches 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 633 WEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
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ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-477-727A-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-477-727A-6
                                                                                                                                                                           JS-08-477-727A-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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                                                                                                 q
                                                              δλ
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                                                                                                                                                                                                                                                                               LOCATION: 32
OTHER INFORMATION: /label= amidated
OTHER INFORMATION: /note= "C-terminal Proline residue is amidated."
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 32;
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                                                                                                                                                                                                                                                                                                                                                                        DB 1; Lo
1.5e-16;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: NO. 57212071e, John F.
APPLICANT: Abajian, Henry B.
TITLE OF INVENTION: Method of Treatment of Pain
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Greenlee and Winner, P.C. STREET: 5370 Manhattan Circle, Suite 201
                                                                                                                                                                                                                                                                                                                                                                        94.0%; Score 172; DB
100.0%; Pred. No. 1.5
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94.0%; Score 172;
      ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A.
REGISTRATION NUMBER: 37,438
REFERENCE/POCKET NUMBER: 92-2021
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-547-2080 ext 427
TELEPHONE: 206-548-2329
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 5370 Manhattan Circle, Sui
CITY: Boulder
STATE: Colorado
COUNTRY: US
2IP: 80303
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/08424866 Patent No. 5721207 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Ferber, Donna M.
REGISTRATION NUMBER: 33878
REFERENCE/DOCKET NUMBER: 1-95
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 499-8080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (303) 499-8089
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                            NAME/KEY: Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32 amino acids
                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 32 amino acids
TYPE: amino acid
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Best Local Similarity 100.°
Matches 32; Conservative
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MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
FILING DATE: 18-APR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
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                                                                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGINAL SOURCE:
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TELEFAX: (
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                                                                                                                                                                                                                                                                                                                                         US-08-176-153-2
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Pred. No. 1.5e-16;
                                                               APPLICANT: Rink, Timothy
APPLICANT: Young, Andrew
APPLICANT: Beeley, Nigel
APPLICANT: Beeley, Nigel
APPLICANT: Prickett, Kathryn
TITLE OF INVENTION: APPERTITE REGULATING
TITLE OF INVENTION: COMPOSITIONS
NUMBER OF SEQUENCES: 108
CORRESPONDENCE ADDRESS:
ADDRESSEE: LYON & LYON
STREET: 633 WEST FIFTH STREET, SUITE 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33
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                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFFWARE: FastSED Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,727A
FILING DATE: 07-7UN-1995
CLASSIFICATION 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18, Application US/08477727A Patent No. 5739106
Sequence 6, Application US/0847727A
Patent No. 5739106
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 94.0%; Sc.
Best Local Similarity 100.0%; P.
Matches 32; Conservative 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 21.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-552-8400
TELEFAX: 619-552-0157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: DUFT, BRADFORD J
REGISTRATION NUMBER: 32,7
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Gaps
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Pred. No. 1.5e-16; ......rrhes 0;
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100.0%; Pred. No. ...
'... 0; Mismatches
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STATE: CA

STATE: CA

STATE: A

STATE: CA

STATE: CA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 43, Application US/0847727A
Patent No. 5739106
GENERAL INFORMATION:
APPLICANT: Rink, Timothy
APPLICANT: Young, Andrew
APPLICANT: Percekt, Nigel,
APPLICANT: Beeley, Nigel,
TITLE OF INVENTION: COMPOSITIONS
TITLE OF INVENTION: COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP
                                                                                                         OCHANGE SYSTEM: DOS
SOFTWARE: FASTESO VOESION 1.5
CURRENT APPLICATION NUMBER: US/08/477,727A
FILING DATE: 0'-JUN 1995
CLASSIFICATION NUMBER: US/08/477,727A
PRIOR APPLICATION NUMBER:
FILING DATE: PROFRMATION:
APPLICATION NUMBER: 32,219
REGISTRATION NUMBER: 32,219
REGISTRATION NUMBER: 32,219
REFERENCE/DOCKET NUMBER: 214/005
'TELECHONE: 619-552-8100
TELEFAX: 619-552-8157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFFWARE: FASTSEQ VERSION 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,727A
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
  INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 32 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.1
Matches 32; Conservative
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COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: LYON & LY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANTI-SENSE: NO
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94.0%; Score 172; DB 1; L
Best Local Similarity 100.0%; Pred. No. 1.5e-16;
Matches 32; Conservative 0; Mismatches 0;
        APPLICANT: Rink, Timothy
APPLICANT: Young, Andrew
APPLICANT: Beeley, Nigel
APPLICANT: Prickett, Kathryn
TITLE OF INVENTION: COMPOSITIOS
TITLE OF INVENTION: COMPOSITIOS
GORRESPONDENCE ADDRESS:
ADDRESSEE: LYON & LYON
STREET: G33 WEST FIFTH STREET, SUITE 4700
CITY: LOS ANGELES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CSNLSTCVLGKLSQELHKLQTYPRINTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3: LYON & LYON
633 WEST FIFTH STREET, SUITE 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 31, Application US/0847727A
Patent No. 5739106
GENERAL INFORMATION:
APPLICANT: Rink, Timothy
APPLICANT: Young, Andrew
APPLICANT: Beeley, Nigel
APPLICANT: Prickett, Kathryn
TITLE OF INVENTION: APPETITE REGULATING
TITLE OF INVENTION: APPETITE
NUMBER OF SEQUENCES: 108
                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSED VERSION 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,727A
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: DUFT, BRADFORD J
RECISTRATION NUMBER: 32,219
REFERENCE/DOCKET NUMBER: 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-552-8400
TELEFAX: 619-552-0157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: peptide HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS: ADDRESSE: LYON & LY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOS ANGELES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FRAGMENT TYPE: ORIGINAL SOURCE: US-08-477-727A-18
                                                                                                                                                                                                                                                  USA
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US-08-477-727A-31
                                                                                                                                                                                                                                                  COUNTRY:
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LOCATION: 1..7
OTHER INFORMATION: /label= Disulfide bond
OTHER INFORMATION: /note= "A disulfide bond exists between the
OTHER INFORMATION: /note= "A disulfide bond exists between the
OTHER INFORMATION: /note= "A disulfide bond exists between the
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                                                                                                                                                                                                                                                                                   Length 32;
                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/847,007A
FILING DATE: 01-MAY-1997
CLASSIFICATION: 424
ATTONREY/AGENT INFORMATION:
NAME: NO. 6083480nan, Kevin E
REGISTRATION NUMBER: 35,303
REFERENCE/POCKET UNBER: 97,209
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-913-0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 8
CORRESPONDESS:
ADDRESSEE McDonnell Boehnen Hulbert & Berghoff
STREET: 300 South Wacker Drive, Seventh Floor
                                                                                                                                                                                                                                                                                        Score 172; DB 2; I
Pred. No. 1.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                       1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                               2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
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94.0%; Score 172; DB
Best Local Similarity 100.0%; Pred. No. 1.5
Matches 32; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-847-007A-2
Sequence 2, Application US/08847007A
Sequence 2, Application US/08847007A
Patent No. 6083480
SEGUERAL INFORMATION:
APPLICANT: Dean, Richard T
APPLICANT: Pearson, Daniel P
APPLICANT: Lister-James, John
TITLE OF INVENTION: Radiolabeled Peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: /label= Amide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: Modified-site LOCATION: 32
                                                                                                                                                                                                        N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : 32 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                        LENGTH: 32 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: 312-913-00
TELEFAX: 312-913-0002
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: peptide
                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           circular
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STREET: 300
TTV; Chicago
                                                                                                                                                                            ANTI-SENSE: NO ; FRAGMENT TYPE: N- ; ORIGINAL SOURCE: US-08-595-868C-38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
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APPLICANT: Wagner, Fred
APPLICANT: Stout, Jay
APPLICANT: Henriksen, Dennis
APPLICANT: Horrige, Bruce
APPLICANT: Holmquist, Bart
APPLICANT: Frank, Julie
APPLICANT: Frank, Julie
CAPPLICANT: Frank, Julie
CAPPLICANT: RECOMBINANT PREPARATION OF CALCITONIN FRAGMENTS AND US
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 94.0%; Score 172; DB 1; L
Best Local Similarity 100.0%; Pred. No. 1.5e-16;
Matches 32; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
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COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastEGO Version 1.5

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/595,868C

CLASSIPICATION 1435

PRIOR APPLICATION 1435

PRIOR APPLICATION DATA:

APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 8648.59US01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612/332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-595-868C-38
; Sequence 38, Application US/08595868C
; Patent No. 5962270
                                                                                              NAME: DUFT, BRADFORD J
REGISTRATION NUMBER: 32,219
REFERENCE/DOCKET NUMBER: 214/
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-552-8400
TELEFAX: 619-552-0157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Carter, Charles G
REGISTRATION NUMBER: 35,093
                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: -43:
SEQUENCE CHARACTERISTICS:
LENGTH: 32 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                         ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FRAGMENT TYPE: internal ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 612/332-9081
         PRIOR APPLICATION DATA: APPLICATION NUMBER:
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                                                          FILING DATE:
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COUNTRY:
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CITY: Washington STATE: D.C.
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                                                                                                                              US-09-139-819A-38
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/note= "The carboxyl terminus is modified to an amide"
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                                                                                                                            ;
                                                                                                                                                                                                               Sequence 2, Application US/09071090;
Sequence 2, Application US/09071090;
Patent No. 6086850
GENERAL INFORMATION:
APPLICANT: Dean, Richard T.
APPLICANT: Dean, Larry R.
APPLICANT: Pearson, Daniel A.
APPLICANT: Lister-James, John
TITLE OF INVENTION: CALCITONIN RECEPTOR BINDING REAGENTS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Diatide, Inc.
STREET: Londonderry
CITY: Londonderry
CTTY: Londonderry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                  94.0%; Score 172; DB 3; Length 32; 100.0%; Pred. No. 1.5e-16; Ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 03053
COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
APPLICATION NUMBER: US/09/071,090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 94.0%; Score 172; DB 3; I Best Local Similarity 100.0%; Pred. No. 1.5e-16; Matches 32; Conservative 0; Mismatches 0;
                                                                                                                                                                                   1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
                                                                                                                                                            2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: /product= "PROLINE 32"
OTHER INFORMATION: /label= amide
US-09-071-090-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: MCDAILELS, PATILOIA A.
REGISTRATION NUMBER: 33,194
REFERENCE/DOCKET NUMBER: DITI 125.1PCT
TELECOMUNICATION INFORMATION:
TELEPHONE: (603) 437-8970
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/847,007
FILING DATE: 01-MAY-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: both
MOLECULE TYPE: peptide
ORIGINAL SOURCE:
ORGANISM: CALCITONIN--SALMON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: Modified-site
                                                                                  Query Match 94.03
Best Local Similarity 100.(
Matches 32; Conservative
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        OTHER INFORMATION:
OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                          US-08-847-007A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION:
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                                                                                                                                                                                                                                                       RESULT 14
US-09-071-090-2
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TITLE OF INVENTION: RECOMBINANT PREPARATION OF CALCITONIN
TITLE OF INVENTION: FRACMENTS AND USE THEREOF IN THE PREPARATION OF CALCITONIN
TITLE OF INVENTION: AND RELATED ANALOGS
NUMBER OF SEQUENCES: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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0
                                                                                                                                                                                                                                                        APPLICANT: STOUT, Jay S.
APPLICANT: HENERKSEN, Dennis B.
APPLICANT: PARTRIDGE, Bruce E.
APPLICANT: HOLMOUIST, Bart
APPLICANT: FRANK, Julie A.
TITLE OF INVENTION: RECOMBINANT PREPARATION OF CALCITONIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 32;
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CONNTRY: U.S.A.

ZIP: 20007-5109

COMPUTER: Eloppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/139,819A

FTIING DATE: 25-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 94.0%; Score 172; DB 4; I
Best Local Similarity 100.0%; Pred. No. 1.5e-16;
Matches 32; Conservative 0; Mismatches 0;
                         1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CSNLSTCVLGKLSQELHKLQTYPRTNTGSGTP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 530
PHIOR APPLICATION DATA:
PAPLICATION NUMBER: US 08/595,868
FILING DATE: 06-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 089187/0144
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Search completed: May 30, 2003, 09:51:38
Job time : 15 secs
                                                                                                                                                               Sequence 38, Application US/09139819A
Patent No. 621635
GENERAL INFORMATION:
GAPPLICANT: WAGNER, Fred W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: FOLEY & LARDNER STREET: 3000 K Street, N.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (202) 672-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (202) 672-530
TELEFAX: (202) 672-5399
INFORMATION FOR SEQ ID NO: 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: peptide
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